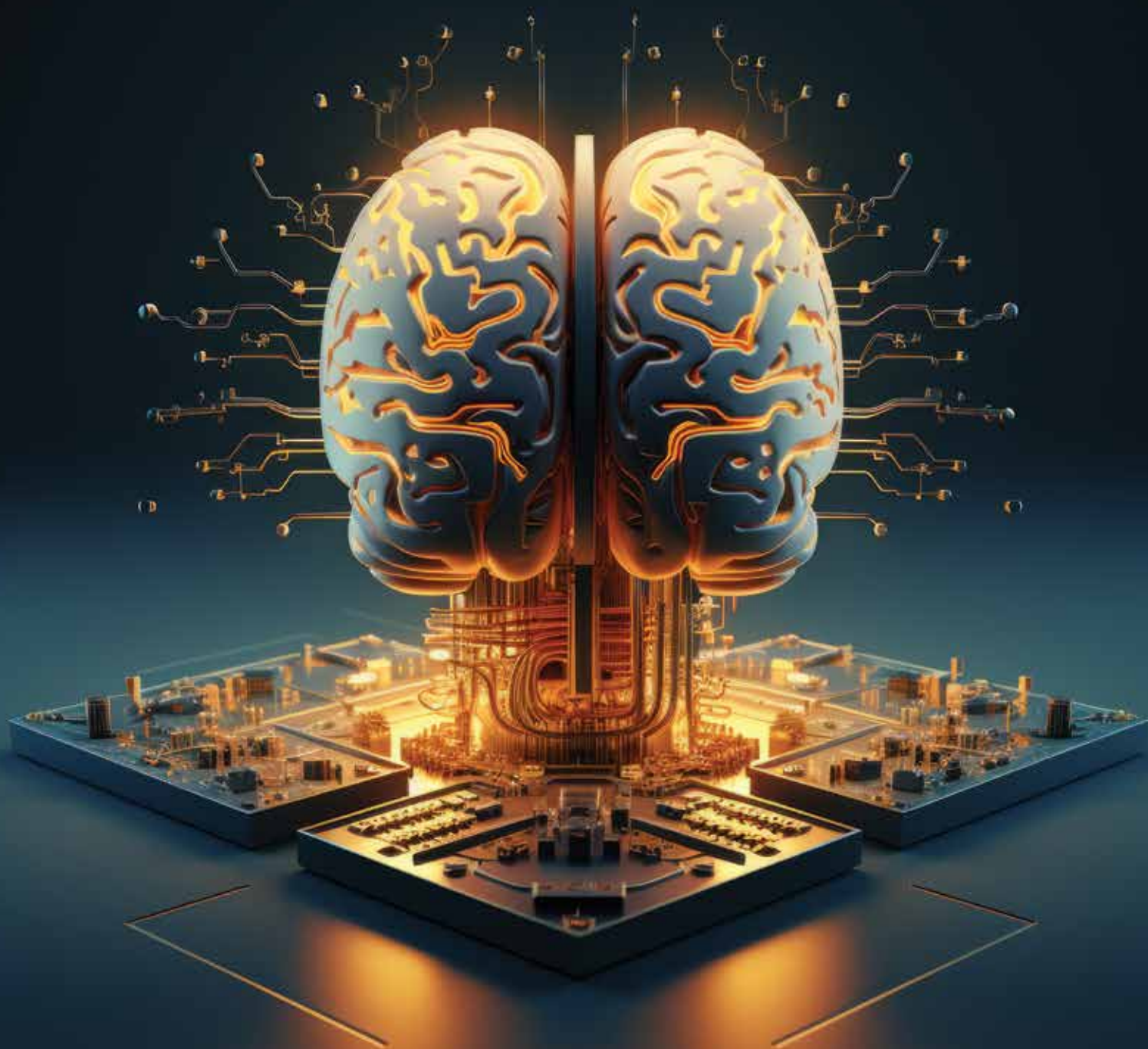




HYDERABAD 2024

SEPTEMBER 5-6 | HICC



VISION TO REALITY

TELANGANA'S AI AND INNOVATION SUCCESS STORY

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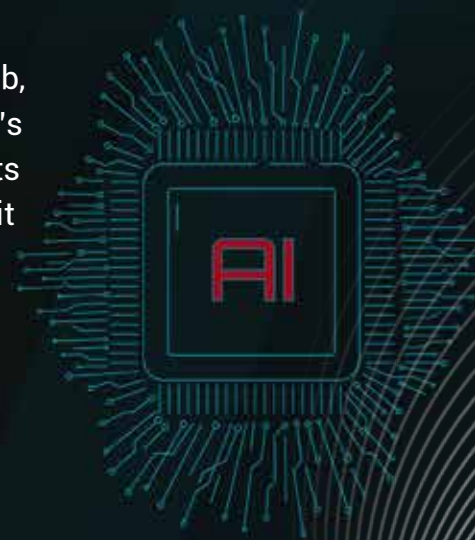
FROM VISION TO REALITY: TELANGANA'S AI AND INNOVATION SUCCESS STORY

Telangana has rapidly emerged as a leading force in India's AI landscape. The state's strategic vision, coupled with a conducive ecosystem, has fostered a thriving environment for AI innovation. With a focus on talent development, infrastructure, and policy framework, Telangana has positioned itself as a preferred destination for AI startups and enterprises.

The government of Telangana has played a pivotal role in driving the AI agenda. Initiatives such as declaring 2020 as the 'Year of AI' and establishing dedicated institutions like T-AIM (Telangana AI Mission) have accelerated the growth of the AI ecosystem. These platforms have provided a launchpad for numerous AI startups, offering mentorship, funding, and market access.

Telangana's AI journey is marked by successful collaborations between the government, academia, and industry. The state has witnessed significant investments in AI research and development, leading to groundbreaking innovations across various sectors. From agriculture and healthcare to education and transportation, AI is being leveraged to address population-scale problems and improve the quality of life for citizens.

As Telangana has solidified its position as India's leading AI hub, it is poised to expand its influence on the global stage. The state's commitment to fostering a culture of innovation, coupled with its rich talent pool and supportive policies, will undoubtedly propel it to new heights in the years to come.





FOREWORD

Sri A Revanth Reddy

Hon'ble Chief Minister,
Government of Telangana

AI for All: Telangana's Journey to Inclusive Growth and Global Impact

In Telangana, we believe in the transformative power of artificial intelligence (AI) to drive progress and uplift every segment of our society. As we continue to build a future fuelled by innovation, our commitment to leveraging AI goes beyond technology—it's about creating opportunities, fostering inclusive growth, and positioning Telangana as a leader on the global stage. With a robust talent pool and a rapidly expanding AI workforce of 3 lakh professionals, we are poised to make this vision a reality.

This compendium showcases Telangana's journey in harnessing AI's potential across sectors. It highlights our pioneering initiatives and innovative applications addressing real-world challenges. From agriculture to urban planning, this document illustrates how AI is improving lives, driving efficiency, and creating new possibilities in our society.

By sharing our success stories, we aim to inspire advancements, attract global partnerships, and cement our position as India's AI powerhouse. Together, we're creating a future where AI drives inclusive prosperity, establishing Telangana as a global leader.



FOREWORD

Sri Duddilla Sridhar Babu

IT Minister,
Government of Telangana

AI-Powered Progress: Telangana's Path to Innovation and Global Leadership

As we enter a new technological era, artificial intelligence (AI) is more than a tool—it's a transformative force reshaping our world. In Telangana, AI is central to our vision for inclusive growth, enhanced governance, and innovation across all sectors. This compendium highlights the significant strides being made by government, enterprises, startups, and academia in Telangana, showcasing how AI is advancing our digital transformation.

The Telangana Government aims to boost IT exports from \$32 billion to \$200 billion by 2030, with AI as a key driver. While concerns about job displacement exist, our focus is on skilling and upskilling to prepare our workforce for an AI-driven landscape. AI has created new opportunities and increased demand for skilled professionals. By enhancing educational programs, partnering with industry leaders, and establishing Centres of Excellence in AI, we are ensuring AI acts as a catalyst for job creation and economic growth.

Telangana's dynamic startup ecosystem, supported by incubators and accelerators, is a hub for innovative AI solutions. Our academic institutions are integral to this AI revolution, fostering collaboration and preparing our youth as leaders in the digital age.

This compendium demonstrates Telangana's commitment to becoming a global AI leader, where AI drives prosperity, inclusivity, and sustainability. I commend all contributors for their dedication to this shared goal.



FOREWORD

Sri Jayesh Ranjan, IAS

Special Chief Secretary,
Information Technology, Electronics
and Communications Department
Government of Telangana

Telangana: India's AI Crucible

Telangana has emerged as a dynamic hub for innovation and technological advancement. Our strategic vision, coupled with a conducive ecosystem, has propelled us to the forefront of the AI revolution. This compendium encapsulates the state's journey in harnessing the power of AI to drive economic growth, social impact, and improved governance.

From fostering a vibrant startup ecosystem to collaborating with industry leaders and academia, Telangana has cultivated a fertile ground for AI research, development, and deployment. Our focus on talent development, infrastructure, and policy framework has created a compelling proposition for AI innovators worldwide.

This document showcases the myriad ways in which AI is being integrated into various sectors, transforming lives and businesses. It is a testament to the collective efforts of the government, industry, and academia in building a future-ready Telangana.

As we embark on this exciting chapter, we invite you to explore the possibilities that AI holds for Telangana and join us in shaping a new era of progress and prosperity.



FOREWORD

Smt. Rama Devi Lanka

Officer on Special Duty &
Director, Emerging Technologies,
Information Technology, Electronics
and Communications Department
Govt. of Telangana

Telangana: Leading the AI Charge

Telangana's commitment to emerging technologies, particularly Artificial Intelligence, is unwavering. This compendium serves as a showcase of our achievements in nurturing a thriving AI ecosystem.

Through strategic initiatives, supportive policies, and collaborative partnerships, we have fostered a dynamic environment for AI innovation. Our focus on talent development, infrastructure, and application-oriented research has positioned Telangana as a preferred destination for AI startups and enterprises.

This document highlights the remarkable work being done by our startups and government departments in leveraging AI to address complex challenges and create new opportunities. We are proud of the progress made thus far and are excited about the potential that lies ahead.

As we continue to explore the frontiers of AI, we remain committed to creating an inclusive and sustainable future for all.



FOREWORD

Sangeeta Gupta

Senior Vice President,
nasscom

Driving the AI Revolution: Telangana's Remarkable Strides

As Telangana emerges as a hub of technological innovation, this compendium showcases the state's remarkable strides in Artificial Intelligence. From government initiatives to corporate breakthroughs, from startup ingenuity to academic research, these pages highlight the collaborative spirit driving Telangana's AI revolution.

Within these stories, you'll discover how AI is transforming industries, enhancing public services, and pushing the boundaries of what's possible. This collection not only celebrates the achievements of Telangana but also serves as a testament to the state's commitment to fostering a thriving AI ecosystem.

As we stand at the forefront of this technological wave, I believe that this compendium will inspire further innovation and collaboration, cementing Telangana's position as a global leader in AI.



Government

CULTIVATING INNOVATION

ADeX's Impact on the Agri-Tech Ecosystem

Project Name: Agricultural Data Exchange (ADeX)

Department / Sector: Agriculture /Agri-tech/Digital Public Infrastructure

Problem:

Agriculture plays a significant role in the Indian economy and is the largest source of livelihood in India employing 60 percent of the nation's workforce and contributing to about 17 percent of its GDP. In spite of several initiatives to support agriculture like providing subsidized fertilizers, irrigation facilities, crop insurance, and minimum support prices for crops, the returns from agriculture do not look lucrative.

Evidently, there is also a growing emphasis on the use of technology and innovation in agriculture including the adoption of precision farming techniques, remote sensing, drones, and the promotion of digital platforms for market access and information dissemination.

Digital public infrastructure (DPI) enables public good through a set of digital platforms and IT systems. Exchanging data to enable the creation of applications or services is complicated for a wide variety of reasons. The availability of data is the single hardest issue when one wishes to create an application to deliver a public service. The ability for application developers and particularly start-ups to experiment and innovate with new data-driven services must be fostered.

It is in this context the Emerging Technologies division, ITE&C department, Government of Telangana identified the need for a DPI for

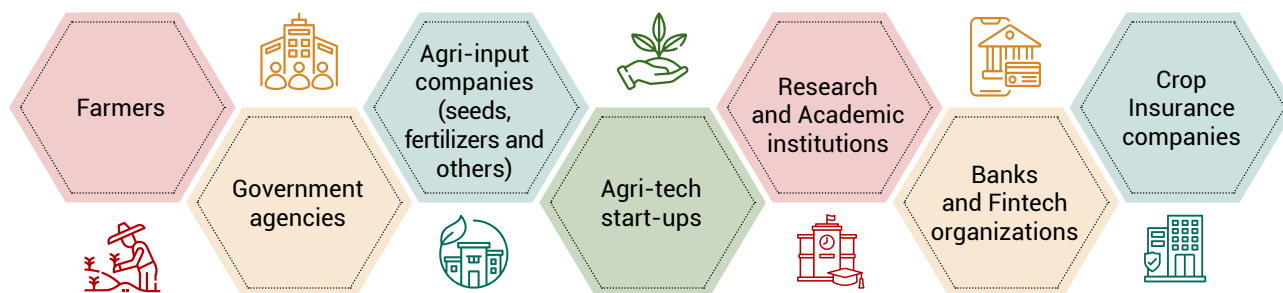
the agricultural ecosystem and initiated ADeX (Agricultural Data Exchange) as a first-of-its-kind DPI to nurture and facilitate a vibrant agri-tech ecosystem for Telangana.

Approach:

Agricultural Data Exchange or ADeX is a digital public infrastructure developed by Government of Telangana to unleash new applications and revolutionize farming practices, drive innovation to empower farmers, researchers and policymakers alike. ADeX enables seamless flow of information and insights among stakeholders in the agricultural ecosystem. By facilitating the exchange of data, the entire agricultural community can leverage collective intelligence and drive systemic improvements - through identification of industry-wide trends, benchmarking of performance and dissemination of best practices.

ADeX democratises and standardizes access to agricultural data, helping innovators focus on solution creation for the farming ecosystem. ADeX does not store any data in itself, but provides a standards-based catalogue of available agricultural data, a comprehensive set of authorization and consent management capabilities, standardized APIs and data models to make data available and a suite of analytics to help the creation of use cases and solutions that can benefit farmers and the farming ecosystem.

Stakeholders:



Impact:

Various third parties and Agritech start-ups have already started building applications and solutions on ADeX, unleashing the power of data. Several solutions have already been created, and more are in the pipeline. Sky is the limit to innovation and ADeX allows the possibility of multitude of use-case scenarios.

The benefits of ADeX extend beyond individual stakeholders. By facilitating the exchange of data, the entire agricultural community can leverage collective

intelligence and drive systemic improvements. It enables the identification of industry-wide trends, the benchmarking of performance, and the dissemination of best practices. This collective effort contributes to the growth and competitiveness of the agricultural sector as a whole.

The widespread use of the ADeX platform will dramatically enhance the power of new data-driven services available to farmers and the agri ecosystem – ultimately resulting in transformation of agricultural services.



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FROM PIXELS TO PLOTS

ALU's Role in Modernizing Agricultural Land Use Planning in Telangana

Project Name: Agricultural Land Understanding (ALU)

Department / Sector: Agriculture /Agri-tech

Problem:

Agricultural land details are available as land records in India comprising various information pertaining to the land such as name of the land holder, survey number, pattadhaar number, khata number, land types, village, block, etc. These land records are organized village-wise in different forms, as RoR record (Record of rights), cadastral maps, survey number maps, etc. Eventhough the cadastral maps can be scanned and digitized, because these maps were produced long ago, there will be a significant difference between the digitized legacy cadastral map and the actual field condition. Therefore, there is a huge demand for determining the current or actual land-use/land condition.

In the existing scenario, land boundaries are intricate and irregular, making it challenging to define exact parcel boundaries. This is especially particular in the case of large-scale surveys where managing data for a large number of survey numbers or sub-survey numbers, and field boundaries can become

very difficult. Additionall, accessing remote or difficult-to-reach areas for data collection can be time-consuming and logistically challenging. The challenges multiply with in adverse weather conditions, such as heavy rain or extreme heat and can disrupt fieldwork and data collection.

Accurate land parcel mapping plays a pivotal role in various facets of land management, ownership and importantly in agricultural planning in India's agricultural ecosystem. The agricultural land parcel mapping helps in identifying farm-level landscape and farm boundaries and also potentially helps in identifying crops grown in each agricultural field.

In this scenario, the Emerging Technologies division, ITE&C Department and Department of Agriculture and Cooperation, Government of Telangana collaborated with Google India for the Agricultural Land Understanding (ALU) project to generate agricultural land use information for effective agricultural planning for the state of Telangana.

This information can support building innovations across the agriculture value chain. Some prospects include:



Agricultural Planning: Governments and agricultural organizations can depend on accurate land ownership information to make informed decisions about crop planning, agricultural forecasting, resource allocation, and overall agricultural development in their state, regions till the village level.



Effective Land Management: Government authorities can utilize on accurate land parcel data for efficient land use planning, property taxation and development projects.

Approach:

Farmers possess agricultural lands with adjoining land parcels that have different survey numbers. Further, these survey numbers would be recorded separately in official land records. However, from a farmer's perspective, these parcels constitute a single, contiguous operational holding. But from a government or outsider's perspective, these are not a single operational holding.

With the existing remote sensing technology and integration of AI/ ML models, it is possible to identify farm-field boundaries of individual farmland parcels with 95% accuracy. However in order to map individual farm-field boundary or an operational holding of one particular farmer, it is important

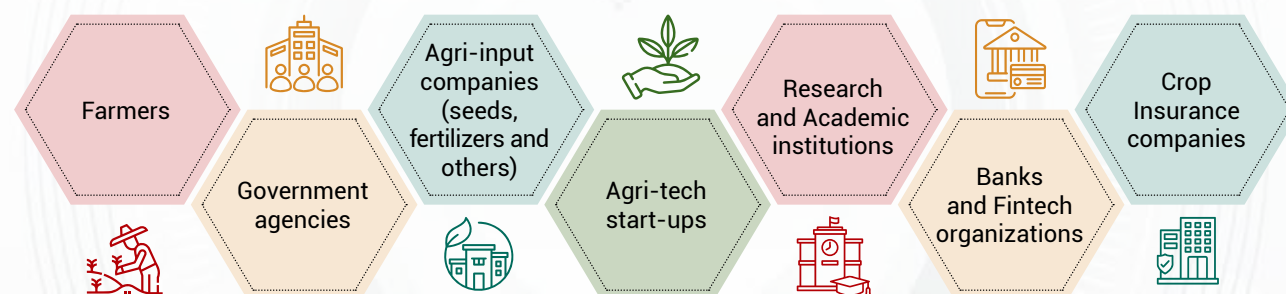
to have additional data along with the satellite imageries or remote sensed data.

The ALU project therefore takes the following data to be integrated into the AI/ML models for arriving at the operational land holding of a farmer:

- Digitised cadastral maps of villages (Telangana Remote Sensing Agency)
- RoR data (Revenue Dept., Government of Telangana)
- Area, Sowing related information, sowing timelines, cropping history of each farmer (Dept. of Agriculture, Telangana)

These data are integrated and ALU output data are generated to assess the operational holding.

Stakeholders:



Impact:

The program is in the final phase of development. The solution will help the Government of Telangana in generating accurate land ownership information so as to make informed decisions about micro-level crop planning, crop forecasting, resource allocation, and overall agricultural development in the state till the village level.

These are some of the impacts envisaged out of this project:

1. Precision Agriculture Support:

A. Crop-Specific Advice: By knowing the exact location and type of crops in each agricultural land parcel, governments can provide farmers

with crop-specific advice on planting, fertilization, irrigation, and pest control.

B. Sustainable Practices: Encourage and support precision agriculture practices that reduce resource wastage and environmental impact

C. Precision Farming: Farmers can use accurate parcel data to apply resources like water and fertilizer precisely, optimizing crop yield and minimizing costs.

2. Relief Measures during Natural calamities

A. Accurate Damage Assessment during Extreme Weather events or Natural calamities: Land parcel tagging enables precise identification of areas affected by

extreme weather events like heavy rains or natural disasters such as, floods or droughts. This information will be useful for government authorities in determining the extent of damages and crop losses during such events. This accuracy will also be crucial for insurance companies to assess damage and expedite compensation.

B. Timely payouts: Government can disburse relief measures and compensations immediately to the farmers. Crop insurance claims can be processed more quickly and fairly, ensuring that farmers receive compensation promptly in the event of a disaster.

3. Agricultural Subsidies:

Governments can use land parcel (ALU) tagging to determine eligibility for agricultural subsidies, ensuring benefits reach the right farmers.

4. Data-Driven Policy Formulation:

Land parcel data can serve as a foundation for data-driven policy formulation, ensuring that

agricultural policies are based on accurate, localized information.

5. Farmer-Wise Yield Estimation:

With tagged land parcels information readily available, the government can estimate crop yields on a per-farmer basis. This information is invaluable for planning and resource allocation.

6. Crop Monitoring:

Real-time monitoring of crop health and growth helps farmers identify issues early and take corrective measures.

7. Land Leasing:

In the context of tenant farming practices, which are quite prevalent in India, this solution will be of help to tenant farmers who lease land, to help them know the exact boundaries of land parcels and ensure fair leasing agreements.

8. Access to Government Support:

Farmers can avail government support programs, subsidies, and services based on their tagged land parcel units.



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IRASTE

Realising the Predictive Power of AI for Road Safety

Project Name: iRASTE

Department / Sector: Public transport, Smart Mobility & Road Safety

Project at a Glance

Project iRASTE, which is an acronym for Intelligent Solutions for Road Safety through Technology and Engineering, is a pilot project launched for the Telangana State Road Transport Corporation (TGSRTC), aimed to apply a Safe Systems approach with the help of artificial intelligence (AI) to improve vehicle safety, identify & prevent black spots, and monitor road infrastructure. With a strong and versatile network of supporters such as IIIT Hyderabad, Government of Telangana, TGSRTC, Uber, INAI, and INTEL, the project plans to maximise the predictive power of AI for enhancing road safety.

Identifying the Challenge:

Road safety is a growing concern. Flouting traffic norms and poor maintenance of roads & infrastructure often causes unprecedented accidents. **Across India, 50% of road accidents occur on highways despite constituting just 5% of the road network. The number of deaths reported on the roads of Telangana has increased from 6,603 in 2018 to 7,559 in 2022.** This number is speculated to increase in the coming years, owing to an increased number of drivers and motor vehicles.

Accident-prone areas, both in the city and outside, can be identified to improve safety. Currently, spotting accident black spots—defined as sites with 5 accidents or 10 fatalities—takes up to 3 years. This delay means more accidents could occur before a problem area is officially addressed.

Proposed Resolution and Benefits:

Project iRASTE enables Road Safety through the following steps:

1. Installation of ADAS Devices:

Advanced Driver Assistance Systems (ADAS) installed in TSRTC buses operating on national and state highways alert drivers of potential incidents, providing crucial information about the route and monitoring safety parameters.

2. Incident Alerts and Data Storage:

Alerts generated by ADAS devices are stored in the cloud for further analysis.

This data helps identify "grey spots" (potential black spots) on the roads.

3. Identification and Monitoring:

Grey spots are mapped using Geographic Information Systems (GIS).

Regular monitoring of these areas helps prevent them from becoming black spots.

4. Implementation of Remedial Measures:

Measures for grey spots are less costly and can prevent them from becoming black spots.

Implementing these measures effectively reduces the risk of major accidents and fatalities.

5. Data Utilization and AI Integration:

The system collects data on road infrastructure and conditions, aiding in accident prediction.

Coupled with AI, this data supports better route planning and provides feedback for timely road management by authorities.

Stakeholders:



Impact Assessment:

- In the 11-month period in which the project has been launched & applied, some significant results have been noted.
- There has been a 33% reduction in bus accidents (private and public buses) in which the ADAS devices have been installed as compared to the non-ADAS fleet, in the period from April 2023 to February 2024.
- The time to identify a grey spot is just 3 months, as compared to 3 years required for the identification of black spots conventionally.
- It also avoids the need for manual inspections and the relevant manpower and associated time lags, thereby fast tracking the process of identification of a black spot and application of measures for ensuring safety in the region.
- The reduction in the number of accidents has reduced maintenance costs across the TSRTC bus fleet. Being a notable impact, this indicates further use of ADAS devices in more buses and other motor vehicles. The project iRASTE has provided resources for training drivers, which can now be more effectively applied and focused upon.



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KRISHI RASTAA

Smart Soil Management in Telangana

Project Name: Smart Nutrient Management of the Soil

Department / Sector: Agriculture/Agri-Tech

Project at a Glance:

Efficiently testing and significantly improving soil quality with easy-to-use technology.

Project Review:

The Smart Nutrient Management of the Soil project, led by Departments of Agriculture and ITE&C, Telangana and Krishitantra, addresses the critical issue of soil health in agriculture. With limited access to soil testing labs, delays in reports, and high costs, farmers struggle to manage the soil nutrients effectively. The project introduced Krishi RASTAA, an automated soil testing device that provides instant soil quality reports and fertilizer recommendations via mobile phones. This initiative improved nutrient efficiency and reduced soil degradation while enhancing productivity and sustainability,

Identifying the Challenge:

Agriculture is the primary sector that is crucial to building India's economy, supporting 58% of rural households. The agriculture sector faces many challenges, with soil health being vital for a profitable, productive, and sustainable agriculture system.

Soil quality alone contributes to 60% of crop productivity. It supports plant growth through nutrient cycling, pest control, and water and air regulation. Moreover, the physical, chemical, and biological properties of soil are sensitive to soil management practices. In India, there are only 3,887 government soil testing labs, equating to 1 lab per 142,000 farmers. Further, the time taken

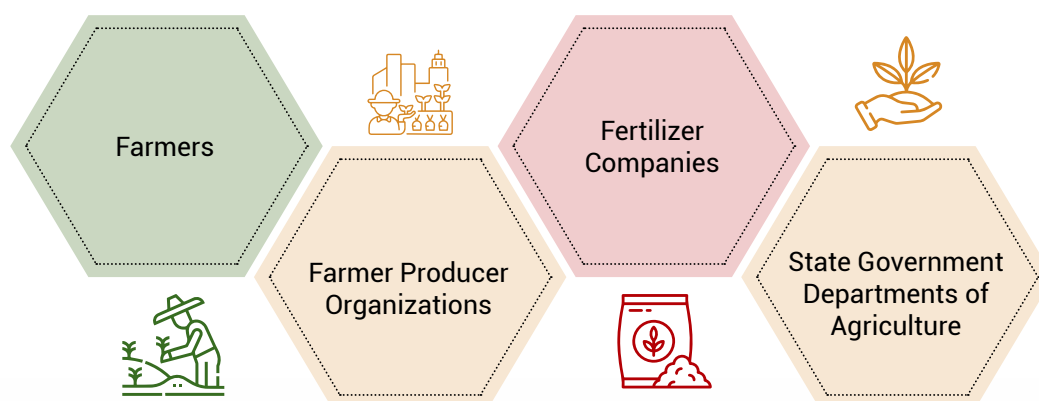
to get the soil test results ranges from a few weeks to even months. This leads to significant inaccessibility and delays in soil test results.

Proposed Resolution and its Benefits:

The quality of soil is a key factor for nutrient management in farming as it maximizes nutrient use efficiency, yields, quality, and profits while minimizing environmental impact. Thus, soil testing is essential for analyzing fields and improving nutrient efficiency. The Telangana Government and Krishitantra developed a rapid soil testing device, Krishi RASTAA – Rapid Automated Soil Testing with Agronomy Advisory. A completely automated and portable soil testing solution, it provides instant soil reports and fertilizer recommendations on farmers' mobile phones, accessible with a unique ID and password. This system improves input efficiency, boosts production and income, and reduces soil degradation, water consumption, and fertilizer use, supporting climate-sensitive agriculture.



Stakeholders:



Impact Assessment:

The reasons attributed to farmers' reluctance to soil testing is the lack of accessibility to soil testing labs in their vicinity, the average time taken for soil testing which ranges from a minimum of 1 week to a few months, high cost, lack of interpretation or fertilizer recommendation accompanying the soil test reports.

The Krishi RASTAA solution (Rapid Automated Soil Testing with Agronomy Advisory) developed by the

Government of Telangana and Krishitantra could address these challenges, with an automated and portable soil testing solution. The solution can determine the soil quality in a quick, accurate, and reliable manner and deploy the soil report in less than 30 minutes along with fertilizer recommendations on the farmer's mobile phone. Research was conducted as a pilot in RangaReddy district of Telangana where 1900 farmers benefited from this initiative of Rapid Automated Soil Testing and Agronomy Advisory.



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SAAGU BAAGU

Telangana's SAAGU BAAGU Project to Enhance Farmer Bargaining Power with AI

Project Name: SAAGU BAAGU

Department / Sector: Agriculture /Agri-tech

Project at a Glance:

A unique project that applies artificial intelligence to agriculture and helps farmers realize correct prices for their produce.

Revolutionizing Chilli Quality Assessment

The SAAGU BAAGU project revolutionizes farming by boosting production, productivity, and profitability through timely, science-driven crop advisories delivered via digital channels like videos and chatbots, well before the cropping season. This proactive approach empowers farmers with the tools they need for superior crop management.

Beyond improving yields, the project promotes environmental sustainability by tackling the overuse of harmful chemical pesticides and fertilizers. Additionally, to enhance chilli quality assessment—currently a subjective and pricing-influencing process—Government of Telangana (Department of Agriculture & ITE&C) teamed up with the Digital Green, the Project implementation partner and AGNEXT, a leading ag-tech startup working on innovative agri-commodities quality evaluation technologies.

The project utilizes a computer vision model developed specifically for assessing the physical quality of chilli pods, deployed by AgNext. These models are tailored for key chilli varieties like Teja and 334, significantly improving the accuracy and efficiency of quality assessment.

Identifying the Challenge:

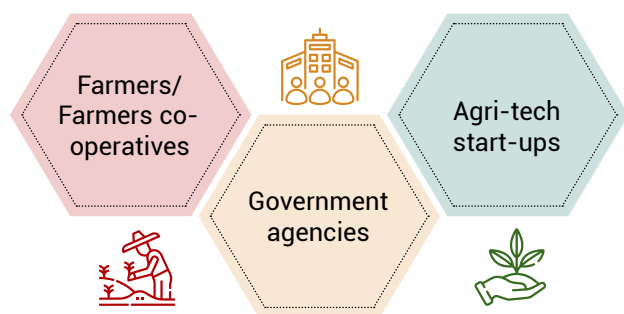
Traditionally, traders or middlemen conduct visual inspections of harvested chillies to set prices, often

leaving producers with minimal profit. In contrast, this project employs a comprehensive scientific approach, evaluating quality based on physical, chemical, and aflatoxin parameters. This detailed quality report not only ensures more accurate assessments but also strengthens farmers' bargaining power with evidence-based reports.

Proposed Resolution and Benefits:

- 1. Deployment of Equipment:** The project deployed testing units for physical, chemical, moisture content, and aflatoxin analysis, along with an API integration unit, at selected locations in Telangana. This will ensure reliable and efficient quality assessment for chilli produce.
- 2. Training and Support:** Field staff were trained and deployed to support and educate farmers in using the quality assessment equipment, empowering them to accurately evaluate their chilli crops.
- 3. Digital Transformation:** Digital transformation was emphasized by using computer vision models for chilli pod quality assessment, leveraging advanced technologies to enhance accuracy and efficiency.
- 4. Training and Awareness:** A joint training and awareness campaign was held at two centers in Telangana to educate farmers about the project's objectives, processes, and benefits.
- 5. Integration and Data Sharing:** The project integrated the AgNext QualiX platform with the FarmStack database via API, facilitating seamless quality report transmission and data sharing between digital platforms.

Stakeholders:



Impact Assessment:

Saagu Baagu ensured both quantitative and qualitative impacts through its interventions:

1. Quantitative Impact:

- **Economic:** The project enabled significant improvements in yield, reduction in cultivation costs and increase in farm gate prices resulting in nearly 20% increase in net income of farmers.
- **Environmental:** The interventions enabled reductions in chemical use (fertilizers and pesticides) and improved water efficiency and decreased carbon emissions.
- **Inclusivity:** Saagu Baagu facilitated the involvement of farmer collectives, women farmers, and smallholding farmers to come together.

2. Qualitative Impact:

- **Efficiency:** The digital interventions of crop advisories succeeded in boosting crop production and productivity leading to efficient agricultural practices.
- **Adoption and Behavior:** There was a marked increase in acceptance of farmers adopting and actively using the agri-tech solutions and their openness to new agricultural technologies.

During 2022-2024, nearly 4,000 farmers used the Quality Assaying (QA) service for their chilli crops, with many securing better prices based on these reports. A third-party evaluation found that most farmers were satisfied and wanted to continue using the service. The farmers also requested government and market interventions to standardize the acceptance of QA receipts in the market, which would help smallholder farmers in further achieving better prices.



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VANNETRA

AI Eye for Wildlife Conservation

Project Name: VanNetra

Department / Sector: Forest Department

Project at a Glance:

VanNetra is an AI-powered platform transforming forest conservation by swiftly converting raw data into actionable insights. Using cutting-edge machine learning algorithms, VanNetra equips forest officials with precise information on the ecological health of various areas, enabling effective and timely conservation efforts.

Identifying the Challenge:

The Government of Telangana has installed secure digital card (SD) normal cameras in many strategic locations in the forest areas to monitor the movement of wildlife, the potential ecotourism zones, and anthropogenic disturbances. These cameras capture good quality photos and are useful for the purposes that the photos are being recorded for. However, the following limitations are associated with this setup:

- The SD card storage gets full every 15 days and therefore, every month, these **SD cards must be replaced twice** in all the cameras installed in the forest.
- Extracting information from these videos is a **manual task**, which makes it an expensive and time-consuming task, requiring additional manpower to do so.
- The generated/captured **photos cannot be obtained remotely**. The SD card must be removed from the camera for the photos to be extracted to analyze the photos captured.

- These **photos cannot be accessed on a real-time basis**, and retrieving them from the cameras and the program is a time-consuming process, causing **delays in taking action**.

Proposed Resolution and Benefits:

To achieve effective monitoring, the use of artificial intelligence (AI)-based solutions is crucial. AI algorithms can process vast amounts of data collected from ground-based camera traps. By applying deep learning techniques, AI can analyze this data in real-time to detect patterns, identify anomalies, and predict potential risks. The pilot has been implemented in Amrabad and Kawal Tiger Reserves of Telangana for processing the camera trap images using this AI solution.

This project can help identify species whose camera images must be captured, which in turn can help prevent poaching and boost tourism.

Stakeholders:





Impact Assessment:

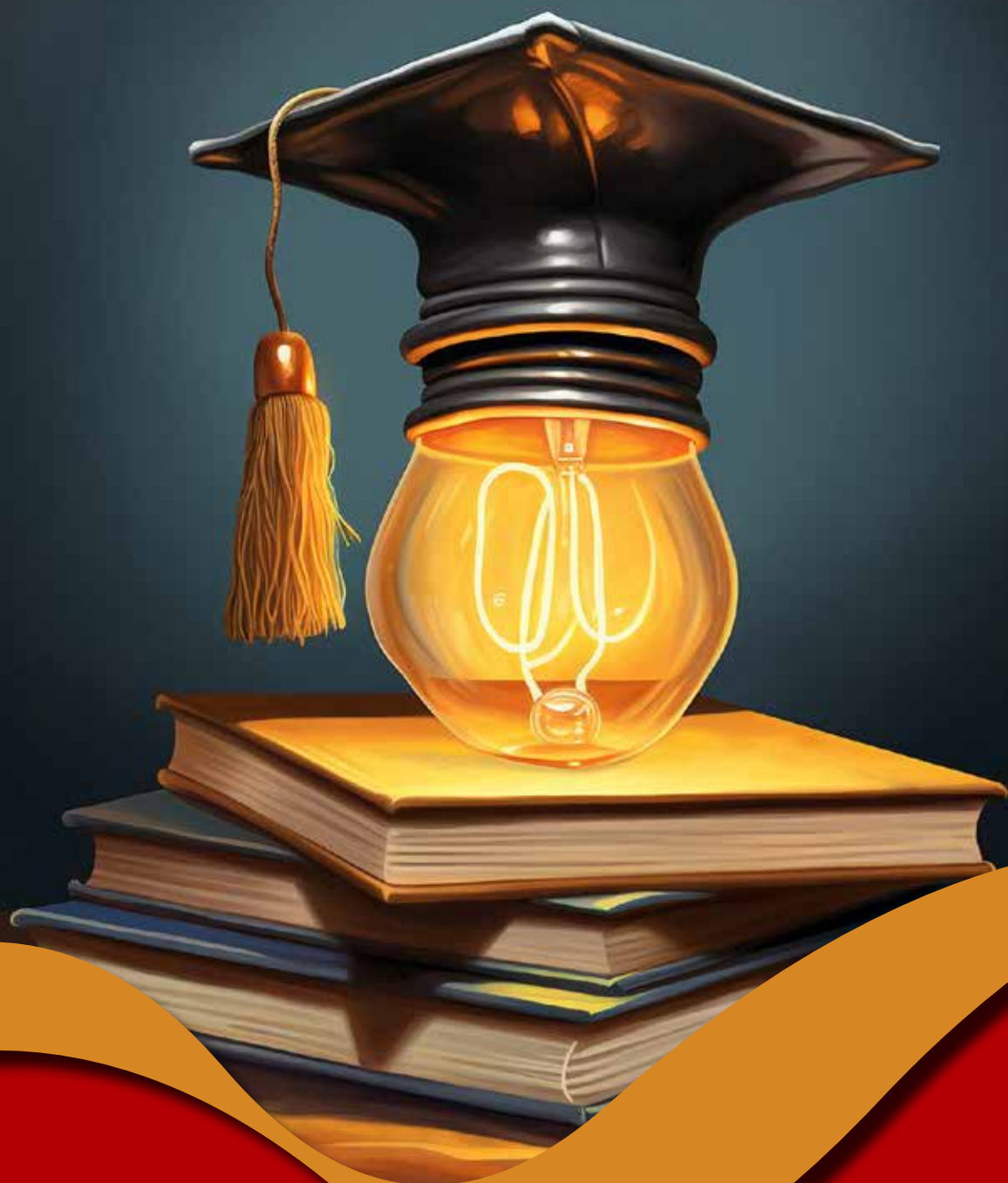
VanNetra has been initiated at two locations in Telangana and its impact has been an eye-opener for many. The data-driven approach provides actionable conservation insights from **large-scale camera-trapped raw data** (4.1 million events) which can be integrated with satellite images for drawing the complete, real-time picture. It can **provide insights into the number, location, and movement** of the animals in the forest. So far, the project has been able to complete **spatio-temporal mapping** of 20 detected common animal species and can be expanded to more species as required. This mapping can help in **identifying potential ecotourism, bird spotting, and human-animal conflict zones**. Additionally, being a technologically driven, the platform **can process**

millions of images faster than the earlier manual approach. The platform can automatically classify and catalogue camera-trap images based on animal species. The technology used in this project can help differentiate between the movements of animals and those caused by wind or trees, giving an **accurate idea of the true events**. The data derived for the selected 20 species can also help to **identify potential human wildfire hazards** and can **prevent the loss of wildlife**. The data can also **identify human-animal conflict zones** and warn caution for such areas to prevent any mishaps to wildlife or humans.

VanNetra is a promising project that applies AI in forests to enhance the tracking of animals and ease the manual aspects of this tracking while providing a real-time picture.

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Academia

ADVANCEMENTS IN AUTONOMOUS DRIVING TECHNOLOGY BY IIT HYDERABAD

Project Name: Autonomous Campus Shuttle (ACS)

University Name: IIT Hyderabad

Project at a Glance:

The NMICPS Technology Innovation Hub on Autonomous Navigation (TiHAN) at IIT Hyderabad, established under the Department of Science and Technology's (DST) National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS), is focused on advancing autonomous navigation and data acquisition systems, including UAVs and ROVs. TiHAN has successfully developed a proof of concept (POC) for an Autonomous Campus Shuttle (ACS) and unmanned aerial vehicles. The autonomous campus shuttle is operational within the IITH campus, providing shuttle services to visitors from the main gate to the hostel circle.

Identifying the Challenge

The challenge addressed by the project is the improvement of road safety, traffic flow optimization, fuel efficiency, emission reduction, enhanced mobility for individuals with driving restrictions, and overall efficiency in transportation through autonomous driving and advanced driver assistance systems (ADAS).

Project Breakdown:

- **Technology Focus:** Autonomous navigation systems, UAVs, ROVs.
- **POC Developed:** Autonomous Campus Shuttle (ACS) and unmanned aerial vehicles.





- **Deployment:** ACS is operational within the IIT Hyderabad campus.
- **Expansion Plans:** Deployment of technology to other locations in Telangana.

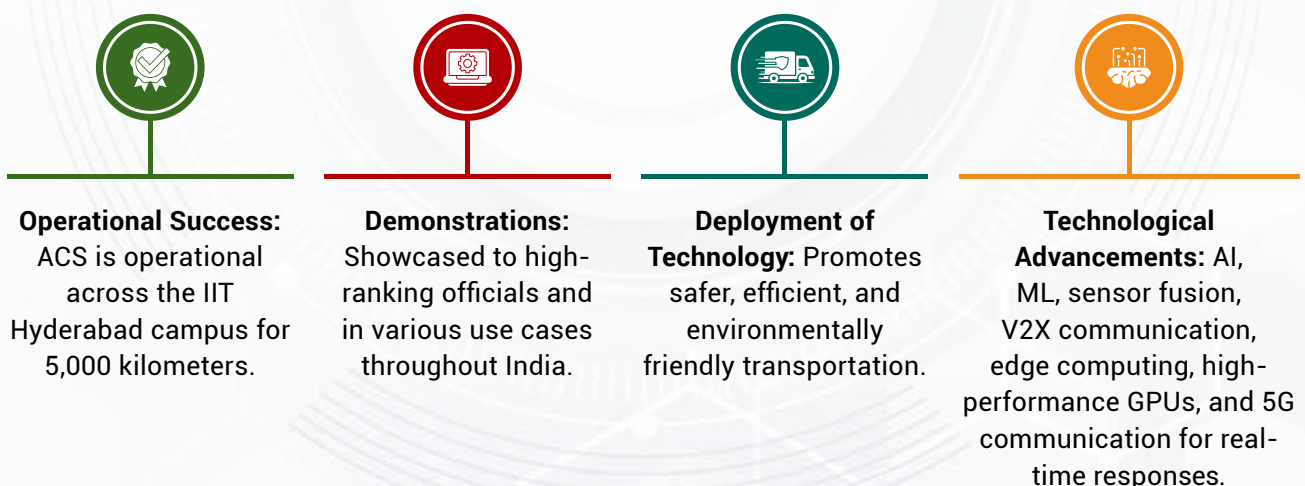
Proposed Resolution and Benefits:

- **Advanced AI Technologies:** Leveraging AI for enhancing safety, efficiency, and performance.

- **AI-Driven Architecture:** Real-time data processing, machine learning, and sensor fusion for intelligent navigation.
- **Predictive Analytics:** Machine learning models enable proactive decision-making and hazard foreseeing.
- **Adaptive Control Systems:** Adjust to varying driving conditions for optimal performance.
- **Collaborative AI:** Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2X) communication for traffic optimization.

When developing autonomous driving solutions, the project adheres to Responsible AI principles, emphasizing transparency, safety, security, and ethical considerations in the development and deployment of autonomous driving systems. This includes providing insights into system operations, comprehensive testing, adherence to industry standards, and considering broader implications related to social, environmental, and ethical aspects.

Impact Assessment



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VEHICLE LANGUAGE CONDITIONED AUTONOMOUS NAVIGATION OF SELF-DRIVING CARS

Project Name: Vehicle Language Conditioned Autonomous Navigation of Self-Driving Cars
University Name: IIIT Hyderabad

Project at a Glance:

The project aims to create a unique pipeline that integrates natural language encodings and 3D semantic maps obtained from visual imagery to generate local trajectories for self-driving cars. This pipeline eliminates the need for a pre-registered map and uses a waypoint generator neural network to map semantics and natural language encodings to local waypoints.

Identifying the Challenge:

The primary challenge was to develop a system that could accurately interpret natural language commands and translate them into suitable actuation for a self-driving car. Additionally, ensuring that the system could function effectively in real-world, uncontrolled outdoor settings posed a significant challenge.

Project Breakdown:

- Development of a novel pipeline combining natural language encodings and 3D semantic maps.
- Use of a waypoint generator network to map semantics and language encodings to local waypoints.

- Testing in simulated environments (CARLA simulator) and with real-world semantic maps from the KITTI dataset.
- Real-world implementation on an electric car to validate the pipeline's effectiveness in uncontrolled outdoor settings.
- Focus on repetitive invocations of the network for language-based navigation without metric maps or localization strategies.

Proposed Resolution and Benefits:

- The proposed pipeline successfully integrated natural language encodings and semantic maps to generate accurate local trajectories.
- By utilizing the waypoint generator network, the system could navigate without the need for pre-registered maps or localization strategies.
- The end-to-end integration of natural language and scene semantics resulted in better performance compared to baseline approaches.
- Real-world experiments on the Mahindra e2o electric car validated the efficacy of the pipeline.

Impact Assessment:

- The project demonstrated that natural language commands could be effectively used for autonomous navigation in self-driving cars.
- Trajectories reached their destination over 90% of the time, even with longer sequence lengths for natural language encodings.
- The system outperformed baselines that did not integrate scene semantics or used a decoupled approach.
- Future work will focus on expanding the diversity of natural language commands and further validation of the system's ability to function without maps or state estimation modules.



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Startups

BHARAT BILL MANAGEMENT



AI-Powered SAAS Platform Empowering Utilities, Consumers, and Local Workforce

Company at a Glance:

The Company leverages AI and ML technologies to revolutionize the way meter reading and billing processes are conducted by utilities. It aims to empower consumers by enabling them to identify wasteful consumption, provide gamified apps for energy conservation, and create part-time employment opportunities for various demographics as a dynamic workforce.

Identifying the Challenge:

Bharat Bill Management addresses the inefficiencies and inaccuracies in traditional meter reading and billing processes, as well as the lack of awareness among consumers regarding their energy consumption patterns and potential bill reduction strategies.

Solution Breakdown/Review:

The AI-powered platform, Bharat Bill Management, ensures accurate meter readings for utilities by utilizing image processing to extract meter values, units, and serial numbers from photographs of electricity, water, or gas meters. It filters out improper reads before bill generation, which is a groundbreaking advancement in the industry.

The introduction of the Bijli Auditor device allows for predictive appliance analysis and recording of appliance-wise consumption in residential and commercial buildings, simplifying home appliance auditing and promoting energy efficiency.

Proposed Resolution and Benefits:

The proposed solution adopts AI and ML algorithms to automate and enhance meter reading accuracy,



Sikinder Reddy & Vinay Ainavolu
Co-founders

empower consumers with insights into their energy consumption habits, and create opportunities for a diverse local workforce to engage in energy conservation efforts. The gamified apps aim to make energy conservation accessible and engaging for individuals of all ages and demographics.

Impact Assessment:

- **Utilities:** The project has onboarded 13+ utilities and conducts about 15M+ meter reads per month, significantly improving accuracy and efficiency in billing processes.
- **Consumers:** Bharat Bill Management addresses consumer concerns by providing appliance-wise consumption insights and proactive alerts to avoid wasteful usage, ultimately leading to reduced utility bills and carbon footprints.
- **Local Workforce (Climate Yodhas):** The project aims to empower 1 Lakh Climate Yodhas with the Bijli Auditor device to conduct home appliance audits for consumers, driving energy efficiency and cost savings.

Bharat Smart Services – Coral Innovations Pvt Ltd

AI powered SAAS platform making meter reading and Billing simple & foolproof for Utilities & Consumers



Value Proposition Just one Photo/Image of any Meter: Reading is auto extracted + Exceptions
Vehicle: ANPR + Violations (New)

Problem Statement	Solution	Customer benefit
<ul style="list-style-type: none"> About 300M Meters are being read manually every month in India alone Inaccurate meter reading is one of the major challenge Millions of consumers paying excess Bills 	<ul style="list-style-type: none"> Every improper meter read can be filtered on real time & accurate meter reading is ensured Highly scalable, any smartphone can be used Bill reduction made simple with digital self services 	<p>B2G/B2B: Accurate & timely Billing for Utilities Cost-effective services for system integrators/meter reading firms</p> <p>B2C: No Excess Bills for Consumers</p>




Venture Stage	Industry: Utilities, Smart Cities, Law Enforcement	Key Customers
<p>Post Revenue</p> <p>On Boarded 13 utilities with 150L+ meter reads/month. 200+ subscribers for bill reduction services 5L+ Bharat Smart Services App users – A Self Meter Reading Services App</p>	<p>Solution Focus</p> <p>Case Study from past: 50 L of additional revenue is realized every month after plugging our services by Bihar DISCOMs. 12 L of monthly excess bills reduced for Consumers</p> <div>  <p>Sikinder Reddy Thandra Co-Founder</p>  <p>Vinay Ainavolu Co-Founder</p> </div>	<div>      </div> <p>“ We are growing exponentially Launching Climate Yodha Services in Telangana from June 2024</p> <p>For more information, sikinder@coralinnovations.in</p>

- The project has successfully processed 1.5 Cr meters monthly, rectifying revenue leakages and enhancing billing accuracy for utilities. By responsibly implementing AI technology, the project ensures reliable and effective outcomes while promoting energy conservation and sustainable practices.

This AI-powered SAAS Platform Empowers Utilities, Consumers, and Local Workforce and

successfully disrupts traditional meter reading and billing processes through accurate image-based readings. Bharat Bill Management empowers consumers with appliance-wise consumption insights and proactive alerts while fixing significant revenue leakages, ultimately enhancing billing accuracy and efficiency. Responsible AI implementation ensures optimal results and sustainability.

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EMBRACING GLOBAL CONNECTIVITY

The AI-Powered Multilingual Digital Human



Company at a Glance:

Brenin Technologies' multilingual Digital Human leverages advanced technology and lifelike realism to eradicate communication barriers in business. The AI/ML-powered digital human offers seamless multilingual communication that transcends traditional language limitations. Whether serving diverse customer bases, facilitating cross-cultural collaboration, or providing immersive language learning experiences, the Multilingual Digital Human promotes deeper connections and enhanced productivity.



Sanjay Jangid
CTO

Suyog Bora
CEO

Identifying the Challenge:

Traditional communication methods often fail to bridge the linguistic gaps in business effectively, hindering customer engagement, employee training, and international expansion. As businesses thrive in an increasingly interconnected world, they need to overcome the limitations posed by language barriers. The multilingual Digital Human addresses this challenge by enabling businesses to engage with audiences worldwide through seamless multilingual communication, unravelling limitless possibilities for global business expansion.

Solution Breakdown / Review:

The multilingual Digital Human blends cutting-edge technology and sophisticated software to create a lifelike avatar with advanced language processing capabilities. It engages in real-time multilingual conversation with users, conveying emotional intelligence through facial expressions and movements. Advanced speech synthesis algorithms generate natural-sounding speech patterns, enabling fluency in multiple languages while natural language processing (NLP) algorithms comprehend users' inputs, facilitating seamless





multilingual communication. The digital human refines its language proficiency and understanding through Machine Learning (ML) and AI algorithms, enhancing its authenticity and engagement with users.

Proposed Resolution and Benefits:

Through its empathetic and multilingual nature, the Digital Human delivers a personalized experience that enhances customer satisfaction and loyalty. Whether it's customer support, sales assistance, or virtual consultation, the digital human delivers exceptional service surpassing traditional communication methods. It can be customized as per the business needs and preferences, enabling versatile multitasking throughout the day. The digital human promotes inclusivity and non-discrimination while providing reliable safety, privacy, and explainability. It upholds positive human values while offering unparalleled convenience, efficiency, and productivity.

Impact Assessment:

The Digital Human is a groundbreaking technology, transforming business communication and engagement by breaking down linguistic barriers. The global AI market is projected to surpass USD 520 billion around 2028, and the digital human is poised to contribute significantly to this tremendous growth.

The digital human's authentic and immersive communication is revolutionizing cross-cultural interactions, customer engagement, employee training, and language learning experiences. The digital human empowers businesses to unlock new markets, streamline operations, and deliver superior experiences, fostering a deeper connection with audiences worldwide. With advanced technology, lifelike realism, and multilingual capabilities, the Digital Human by Brenin Technologies promises to be a game-changer in global business communication.

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DEEPEdge AI



Groundbreaking Innovations in AI-Driven Security and Automation

Company at a Glance:

DeepEdge AI is the developer of industry's leading integrated low code, no code platform to build, optimise, and deploy edge-aware AI models and custom AI solutions across multiple industry verticals including security & surveillance, manufacturing, agriculture, retail, and healthcare. DeepEdge has partnered with leading AI silicon companies including Nvidia, Intel, and Qualcomm. DeepEdge AI is headquartered in San Ramon, CA with their design centre based out of Hyderabad, India.



Ravindra Adapa
Cofounder & CTO

Identifying the Challenge:

Challenges faced by various industries include difficulties in developing accurate **deep learning models for computer vision and large language models (LLMs)**, which can impede progress in various AI applications. Additionally, industries face issues with **manual visual inspection processes** that are prone to errors and inefficiencies. These problems hinder the ability to maintain high quality and operational efficiency, creating a need for advanced solutions to address the complexities of model development and visual inspection in the evolving landscape of Industry 4.0.

Solution Breakdown / Review:

DeepEdge.ai offers an advanced AI platform designed for developing deep learning models in computer vision and large language models (LLMs). Their AI-enabled visual inspection solution enhances Industry 4.0 capabilities by automating quality control and monitoring processes. This integration improves operational efficiency and accuracy, leveraging cutting-edge technology to

address complex challenges in visual inspection and model development.

Proposed Resolution and Benefits:

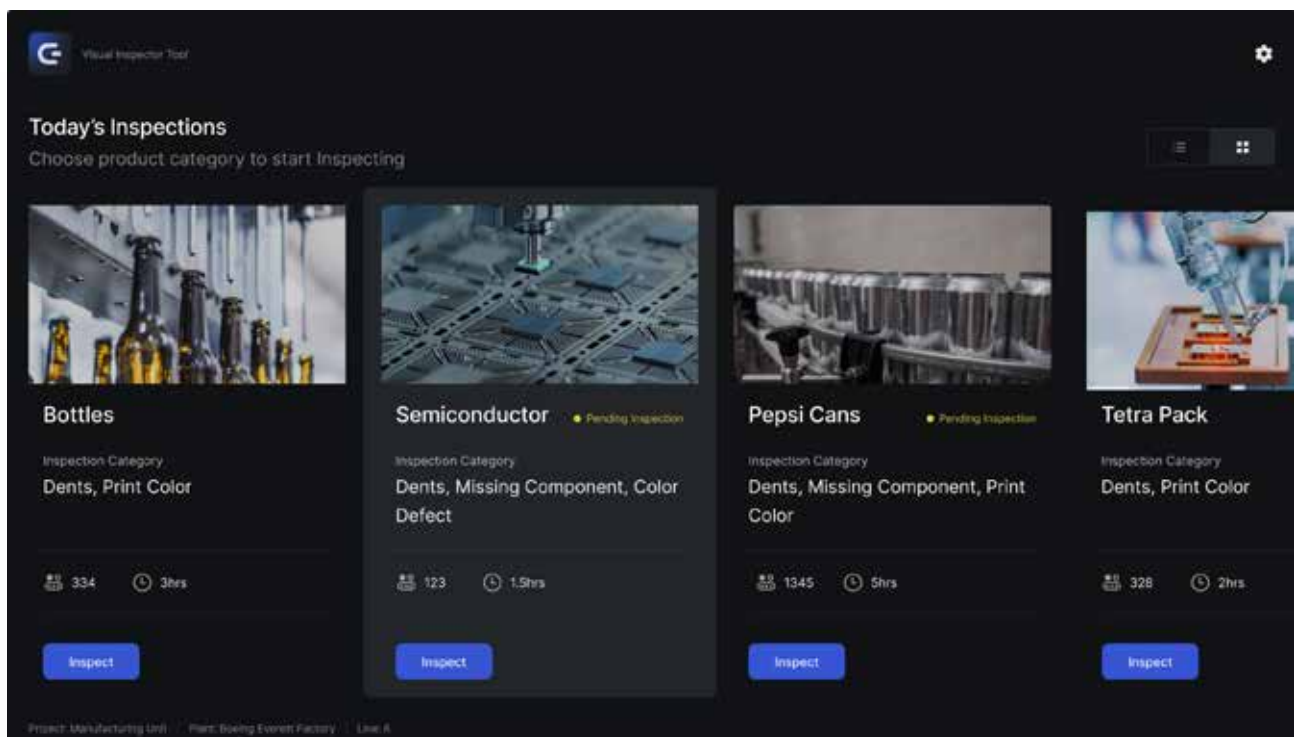
Through their platform, pre-trained AI models, and custom AI solutions, DeepEdge enables their customers to rapidly build and deploy innovative solutions in their respective vertical industries. The platform leverages homegrown AI models and builds an innovative smart visual inspection solution for industry 4.0 to detect defective parts during manufacturing, assembly and other processes and therefore, improves end product quality. This leads to significant cost savings and increased customer satisfaction.

Impact Assessment:

Over the past five years, DeepEdge.ai has achieved several groundbreaking milestones for its customers as follows:

1. The company introduced the industry's first **multi-spectral AI camera**, enhancing enterprise security with advanced surveillance capabilities.

2. It launched the first **battery-operated body-worn smart camera**, specifically designed for law enforcement, revolutionising on-the-go video recording.
3. The development of the first **drone-based smart perimeter security solution** that elevated surveillance from the sky.
4. The creation of the first **AI-enabled robotic solution** for the beauty industry set new standards for automation.
5. The production of the leading **autonomous robot for smart agriculture** significantly advanced farming technology.



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OPTIMISING MANUFACTURING WITH HYPERVISE.AI

Addressing Key Industry Challenges



Company at a Glance:

Eternal Robotics is a pioneering technology solutions provider at the forefront of innovation in robotics, artificial intelligence (AI), and automation. Their multidisciplinary team of experts combines extensive technical expertise with a passion for pushing boundaries, enabling them to develop customised solutions tailored to their clients' unique needs. From Manufacturing to Retail, they empower organisations to optimise efficiency, enhance productivity, reduce risks, and unlock new possibilities through digital transformation.

Identifying the Challenge:

Manufacturing companies often face significant challenges across their value chain, including issues related to safety, efficiency, and quality control. In large-scale operations, ensuring consistent safety standards can be complex and resource-intensive. Efficiency in production processes is frequently hindered by outdated methods and technologies, leading to suboptimal performance. Additionally, maintaining high-quality control standards across diverse manufacturing processes poses difficulties, often resulting in variability and defects. These challenges are compounded in industries such as automotive, pharmaceuticals, apparel, and electronics, where stringent standards and large-scale operations further complicate the management of safety, efficiency, and quality.

Solution Breakdown / Review:

Eternal Robotics has advanced its capabilities in Computer Vision AI and AIoT, significantly impacting Industry 4.0. Their Hypervise AI platform integrates seamlessly into industrial environments, offering cutting-edge solutions for real-time data analysis




Srikar Reddy
CEO

and automation. The platform's versatility supports various applications, from enhancing visual inspection processes to optimising operational efficiency. By leveraging these technologies, Eternal Robotics delivers robust, scalable solutions that drive innovation and productivity in industrial settings.

Proposed Resolution and Benefits:

Hypervise.ai is a cutting-edge multi-modal AI platform designed for controlling industrial processes. It addresses challenges faced by major manufacturing companies throughout their value chain, focusing on safety, efficiency, and quality






Hypervise

AI Video Analytics software platform for Industrial Process Control.

Leveraging the power of **Computer Vision** and **Deep Learning** to make your data deliver business critical insights for you



control. The platform's proprietary data centre and model factory enable hyper-customization and swift deployment, catering to a broad spectrum of Industry 4.0, Manufacturing Excellence, and Digital Transformation needs. With a particular emphasis on the automotive sector, Hypervise.ai serves over 90% of India's consumer and commercial automotive manufacturers, including their Tier-1 and Tier-2 suppliers, as well as prominent players in the pharmaceutical, apparel, and electronics industries.

Impact Assessment:

- Eternal Robotics has engaged with 92 clients across 15 industries, showcasing the versatility and adaptability of Hypervise technology.
- More than 58% of these engagements resulted in valid problem statements, which were carefully evaluated.
- This process identified 22 feasible use cases, leading to a conversion rate of over 33% for Proof of Concepts.
- Implementations have developed 14 core features, each customizable based on environmental factors, with a conservative business value estimated at over \$2 million, potentially increasing fivefold with international expansion.
- The company has 13 paying large enterprise customers with deployed solutions among India's leading automotive manufacturers and Tier-1 suppliers.

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HIRE++



Uses Advanced AI Features To Fuel Hiring Success



Piyush Raj Akhouri
CEO & Co-Founder



Shobhit Prakash
Co-Founder



Sravan Akhil Madira
Co-Founder & CTO

Company at a Glance

Hire++ aims to transform lateral hiring processes, empowering organizations to independently source, evaluate, and recruit top talent without the need for external agencies or outdated systems. Leveraging advanced AI capabilities, the platform offers features such as AI-led interviews, 360-degree assessments, talent prospecting, and real-time analytics to enhance the talent pipeline.

Identifying the Challenge:

The recruitment industry faces challenges such as inefficiencies, biases, and dependency on traditional job boards and Applicant Tracking Systems that often lead to suboptimal hiring outcomes. Recruiters encounter manual processes, limited access to quality candidates, and unconscious biases affecting fair evaluations. This landscape results in prolonged hiring cycles, increased costs, and mismatches between candidates and job roles.

Solution Breakdown:

By harnessing AI capabilities, Hire++ optimizes the talent acquisition process, minimizes interview

rounds, and offers significant cost savings. The platform enables startups, GCCs, and fast-growing SMEs to achieve superior candidate-job fitment, streamline recruitment procedures, and achieve better hiring outcomes.

Proposed Solution and Benefits:

Hire++ offers a robust solution to address these challenges by introducing advanced AI-driven features that streamline lateral hiring processes. The platform enables recruiters to optimize the talent pipeline, reduce interview rounds, eliminate biases, and save time and costs associated with traditional recruitment methods. By leveraging AI and Hybrid Intelligence, Hire++ empowers startups, GCCs, and fast-growing SMEs to enhance



candidate-job fitment, streamline recruitment processes, and achieve better hiring outcomes. The platform's inclusivity, reliability, privacy measures, transparency, and accountability ensure fair, accurate, and secure recruitment practices.

Solution Overview

- **AI-Led Interviews:** Conducts unbiased, standardized interviews to reduce human bias and ensure fair assessments.
- **360-Degree Assessments:** Provides comprehensive evaluations integrating skills testing and behavioral analysis for a holistic candidate view.
- **Talent Prospecting and CV Parsing:** Swiftly parses resumes to identify suitable candidates matching job requirements.
- **Real-Time Analytics and Insights:** Offers AI-driven dashboards for informed decision-making and effective recruitment metric tracking.
- **Technologies Used:** AI, Machine Learning, NLP, Transformers, Computer Vision, OCR, Sentiment and Speech Analysis, Automated Interview Systems, Conversational AI, Data Analytics, Cloud Computing, Integration Capabilities.

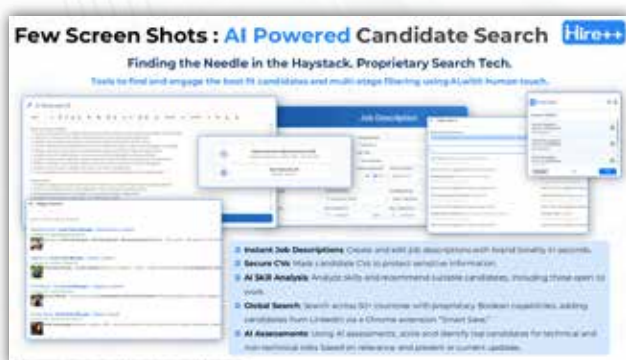
Patent Pending Innovations in AI:

- AI Contextual Parser
- AI Hiring Copilot
- Hire++ 360 Candidate Fitment Reports

Impact Assessment:

Hire++ has made significant strides in the HR industry, delivering exceptional results and reshaping the hiring landscape. The platform has demonstrated its effectiveness by successfully closing crucial positions with minimal candidate submissions and earning substantial revenue through seamless placements.

Partnerships with prominent organizations have expanded its global reach, facilitating cross-border hiring and revolutionizing job preparation for MBA candidates. Noteworthy achievements such as flawless fairness in AI-powered events and successful large-scale pilot programs highlight Hire++'s impact on the industry. With its cutting-edge technology and exceptional performance, Hire++ is leading the way in transforming HR practices worldwide.



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PROACTIVE LAW ENFORCEMENT



Interpol Geospatial Crime Predictor

Company at a Glance:

Ignesa's Geospatial solution, Interpol, is a cutting-edge tool that leverages GIS Application Development and location intelligence powered by AI to predict and prevent criminal activities. By utilizing advanced algorithms and machine learning models, Ignesa's solution analyzes historical crime data, demographic information, and environmental factors to forecast high-risk areas for potential criminal incidents.

Identifying the Challenge:

Law enforcement agencies face challenges in efficiently allocating resources and preventing crimes in rapidly expanding urban centers. Ignesa's solution addresses this issue by providing a proactive approach to crime prediction and resource optimization.

Solution Breakdown / Review:

Interpol, a Geospatial crime predictor signifies a groundbreaking advancement in crime prediction systems, offering law enforcement agencies a powerful tool to improve public safety, optimize resource allocation, and uphold ethical standards in law enforcement practices through innovative geospatial solutions and GIS application development.

Technologies Used:

GIS Application Development, ESRI Map Services, SQL, Mulesoft ESB, Elastic Search, Custom AI/ML Models



Spandan Kar
Founder



**Pavan K
Eleswarapu**
CEO & Co-Founder

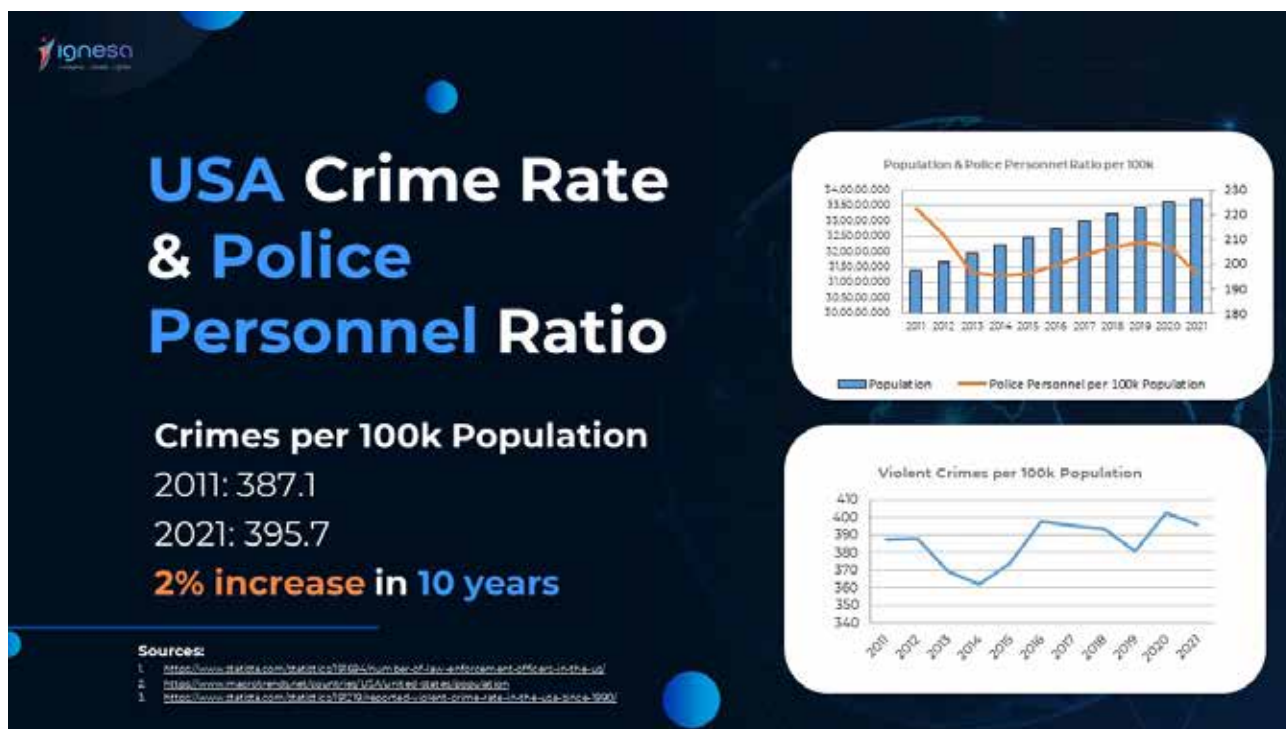
Key Features:

Geospatial crime prediction, AI-powered algorithms, ethical AI principles, accountability in patrol route recommendations

Proposed Resolution and Benefits

Interpol offers a comprehensive solution for law enforcement agencies to enhance crime prevention strategies and public safety. By leveraging geospatial technology and AI algorithms, the system accurately predicts potential crime hotspots and provides optimized patrol routes for proactive law enforcement actions. Some of the benefits include:

- Efficient resource allocation for law enforcement operations.
- Proactive crime prevention measures through accurate predictions.
- Ethical considerations, including inclusivity, non-discrimination, and privacy protection.
- Accountability and transparency in patrol route suggestions for crime rate reduction.



Impact Assessment

Innovativeness: Ignesa's Interpol stands out for its utilization of GIS Application Development and geospatial solutions, providing a unique approach to crime prediction and prevention.

Ethical Focus: The system prioritizes ethical AI principles, compliance, and the protection of human values, ensuring responsible and fair use of predictive technologies in law enforcement.

Collaborative Development: Ignesa's collaboration with law enforcement officials ensures the relevance and effectiveness of the solution in real-world crime prevention scenarios.

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BEYOND TRADITIONAL LOGISTICS



AI's Disruption in Supply Chain Management

Company at a Glance:

KoiReader Technologies is a pioneer and global leader in Vision and Generative AI-powered solutions for the logistics, supply chain, and industrial automation sectors. Their KoiVision® Platform and AI Operating Model have garnered endorsement from Fortune 50 and equivalent companies, offering a comprehensive range of offerings including Smart Warehouse, Smart Yard, Smart Port, and Manufacturing Intelligence.



Ashutosh Prasad
CEO



Vivek Prasad
Co-Founder & CTO

Identifying the Challenge:

In an industry where AI projects often struggle to provide accurate and seamlessly integrated solutions, KoiReader has emerged as a game-changer. Their commitment to providing actionable insights across warehouse, yard, port, and manufacturing operations addresses the crucial need for accessible, high-accuracy AI technologies in the global supply chain and logistics industry.

Solution Breakdown/Review:

KoiReader Technologies utilizes a proprietary AI-powered Visual Cognitive Engine supported by over 15 patents to deliver real-time operational intelligence to clients in the logistics, supply chain, and industrial sectors. Employing a suite of



NVIDIA technologies and a cloud-native approach, KoiReader ensures reliable, secure, and scalable solutions across all facets of the supply chain.

Proposed Resolution and Benefits:

KoiReader Technologies leverages a broad array of NVIDIA technologies including the Metropolis stack, TAO Toolkit, DeepStream SDK, TensorRT, and Triton Inference Server, effectively optimizing model training, inference, and deployment processes. Embracing a cloud-native approach with containerization, Kubernetes, and microservices, KoiReader ensures that its solutions are scalable and efficient for clients,

ultimately resulting in increased throughput and real-time analysis at the edge.

Impact Assessment:

The successful implementation of KoiReader's solutions at multiple facilities for Fortune 50 and equivalent-sized customers underscores the significant impact and value they bring to the global supply chain and logistics sector. By providing real-time operational intelligence for warehouse, yard, port, and manufacturing operations, KoiReader Technologies is revolutionizing the industry and driving operational efficiency and growth for its enterprise clientele.

KoiReader Technologies

KoiVision
simulation, visualization, automation

OUR SOLUTION SUITE

- Warehouse Intelligence
- Yard Intelligence
- Manufacturing Intelligence
- Port Intelligence
- Omniverse & Digital Twin
- Enterprise Generative AI
- API Store

ONE PLATFORM • MANY SOLUTIONS

KoiReader Technologies is a pioneer and global leader in AI-powered Logistics, Supply Chain, and Industrial Automation solutions, and recognized in the industry for its **KoiVision Platform and AI Operating Model**. Through our proprietary Visual Cognitive Engine, we provide real-time process, cargo, inventory, and asset visibility for logistics and supply chain organizations.

We chose the name Koi as it means "Any" (for any data format, unstructured or structured) in Hindi as well as accurately represents the underlying technology i.e. K(C)ognitive Optical Imaging.

A NEW ERA OF AI AND ROBOTICS HAS ARRIVED

AN AI OPERATING MODEL TO CREATE EXTRAORDINARY VALUE

AI Working & Organizational Algorithms → AI Operating Model Design → AI First Partner Solution → Measurement & Self-Optimization → Macro & Micro Application → Digital Twins & Video Analysis → Multimodal LLM & Generative AI

Scan for Our Solution Brochure (QR code)

KoiReader Technologies, Inc. © 2016-2023. All Rights Reserved. sales@koireader.com www.koireader.com

PepsiCo and NVIDIA endorse KoiVision Platform

PepsiCo Leads in AI-Powered Automation With KoiVision Platform

IN PARTNERSHIP

kinetic vision

KoiReader Technologies

KoiVision Platform

KoiReader's Innovation Showcased at 2023 G20 Summit

Physical & Process Digital Twin

We Authored National Logistics Policy for World's 5th Largest Economy

15+ GLOBAL INNOVATION AWARDS

UPS

PORT

INTEGRITY

cargo factoring

and many more...

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MAYA MD



Revitalizing Healthcare with AI-Based Virtual Triage Solution

Company at a Glance:

The growing cost of healthcare amplified by the shortage of healthcare workers and a lack of patient engagement has created significant challenges in the healthcare sector. Patients often don't receive adequate time with their healthcare workers, leading to misdiagnosis and mortality. To address these concerns, Maya MD, a virtual triaging solution leverages AI for remote patient monitoring and engagement, particularly in low-bandwidth and resource-constrained settings.

Maya MD, a post-discharge care solution can be applied to post-surgery patients, reducing readmission by 45% and enhancing clinical outcomes. The solution uses technologies like AI/ML, IoT medical devices integration, and responsible AI principles like compliance, inclusivity, explainability, and non-discrimination to create a more accessible and efficient healthcare system for all.

Identifying the Challenge:

The challenge lies in the growing cost of healthcare, which is amplified by the shortage of healthcare workers and a lack of patient engagement. Patients often do not receive sufficient time with their healthcare workers, leading to misdiagnosis and mortality, particularly in low-resource settings. To address these challenges, Maya MD is aimed at creating a solution that leverages AI for remote patient monitoring, engagement, and post-discharge care, thereby enhancing clinical outcomes and reducing readmission rates.

Solution Breakdown / Review:

The healthcare sector is plagued by multiple challenges, including rising costs, a shortage



Dr. Raju M R
Director

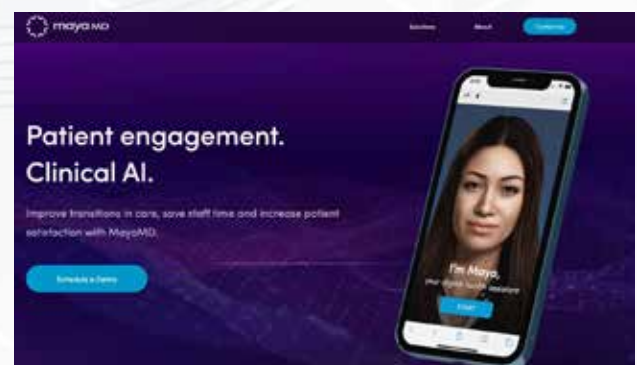


Vipindas Chengat
Founder & Chairman

of healthcare workers, and a lack of patient engagement. Maya MD aims to address these concerns by leveraging AI technology to create a virtual triaging solution that improves remote patient monitoring and engagement.

Proposed Resolution and Benefits:

This proposed resolution involved the development of an AI-based virtual triaging solution, Maya MD, that improves remote patient monitoring, engagement, and post-discharge care. The solution enables the processing of 8000 clinical conditions in less than 2 minutes, with an accuracy rate of over 90%.





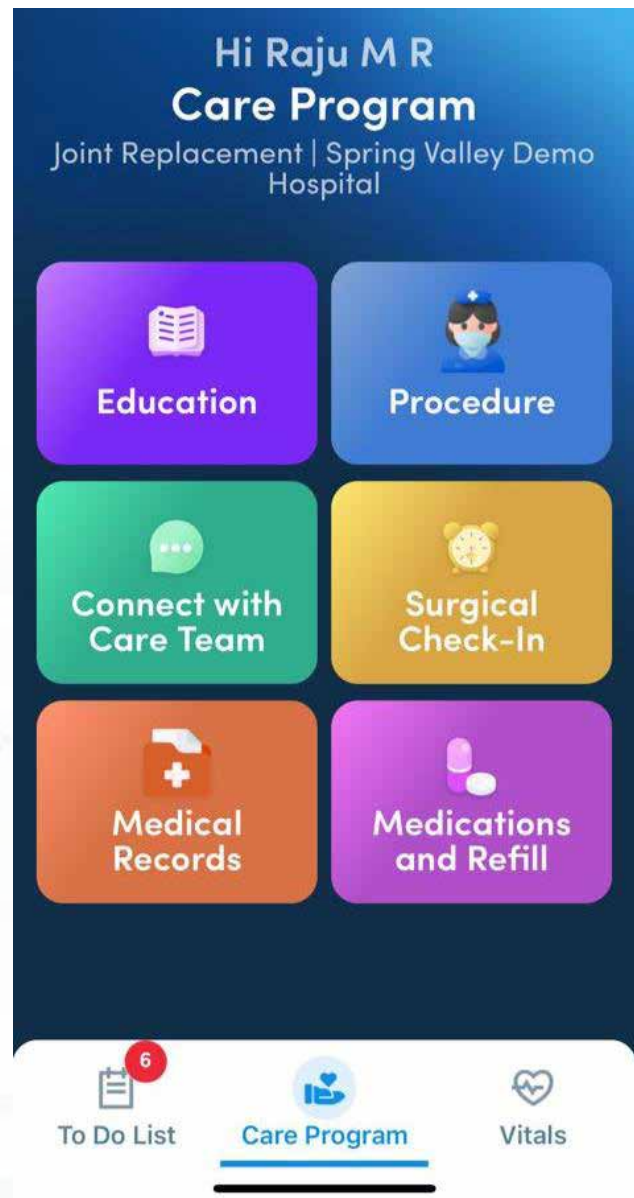
The post-discharge care solution can be used in post-surgery patients, reducing readmission rates by 45% and improving clinical outcomes. Technologies like AI/ML, IoT medical devices integration, and responsible AI principles are leveraged to address compliance, inclusivity, explainability, and non-discrimination to create a more efficient and accessible healthcare system.

By leveraging these technologies, healthcare providers can monitor patient progress in real time and intervene promptly to manage potential health problems.

Impact Assessment:

Since its launch, Maya MD has achieved significant scale, with over 4,00,000 downloads on Android and 1,00,000 downloads on iOS. This solution's effectiveness has revolutionized the way healthcare providers monitor patient health in real-time, enabling prompt interventions and improving clinical outcomes.

With the ability to process 8000 clinical conditions in less than 2 minutes with a remarkable 90% accuracy rate, Maya MD has significantly reduced the time and cost required for remote patient monitoring.



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The AI Solution Redefining Telecom Customer Interactions

Company at a Glance:

Nuva revolutionises customer support with its AI-powered Voice & Chat Bots, seamlessly integrated with Human-in-the-Loop and Document AI for telecom-grade performance. Nuva's Intelligent AI engine offers up to 50% reduction in hold times and enhanced service efficiency. Nuva automates interactions, learns from diverse data sources, and offers multilingual support, ensuring personalised and swift customer engagements.

Identifying the Challenge:

Nuva addresses several critical challenges in the telecommunications sector AI-driven platform.

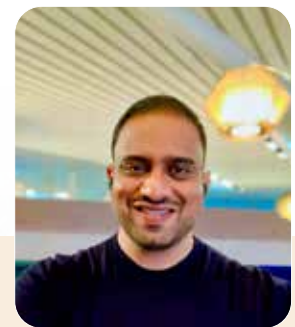
- Inefficient Customer Service
- Limited Accessibility
- Language and Dialect Barriers
- High Customer Churn Due to Poor Service Experience
- Inadequate Utilisation of Customer Interaction Data

Solution Breakdown / Review:

Nuva, by Nuronics Labs, is a state-of-the-art AI-driven platform engineered specifically for telecom-grade applications, making it an indispensable tool for the telecommunications industry. This robust system is designed to meet low-frequency requirements with unparalleled efficiency, featuring advanced speech recognition capabilities that accurately identify a wide range of speeches across multiple accents and dialects. With a Word Error Rate (WER) of < 8%, Nuva sets the standard for speech accuracy in telecom products, outperforming competitors in clarity and precision.



**Dr. Venkata
Ramana Appala**
Co-founder & CTO



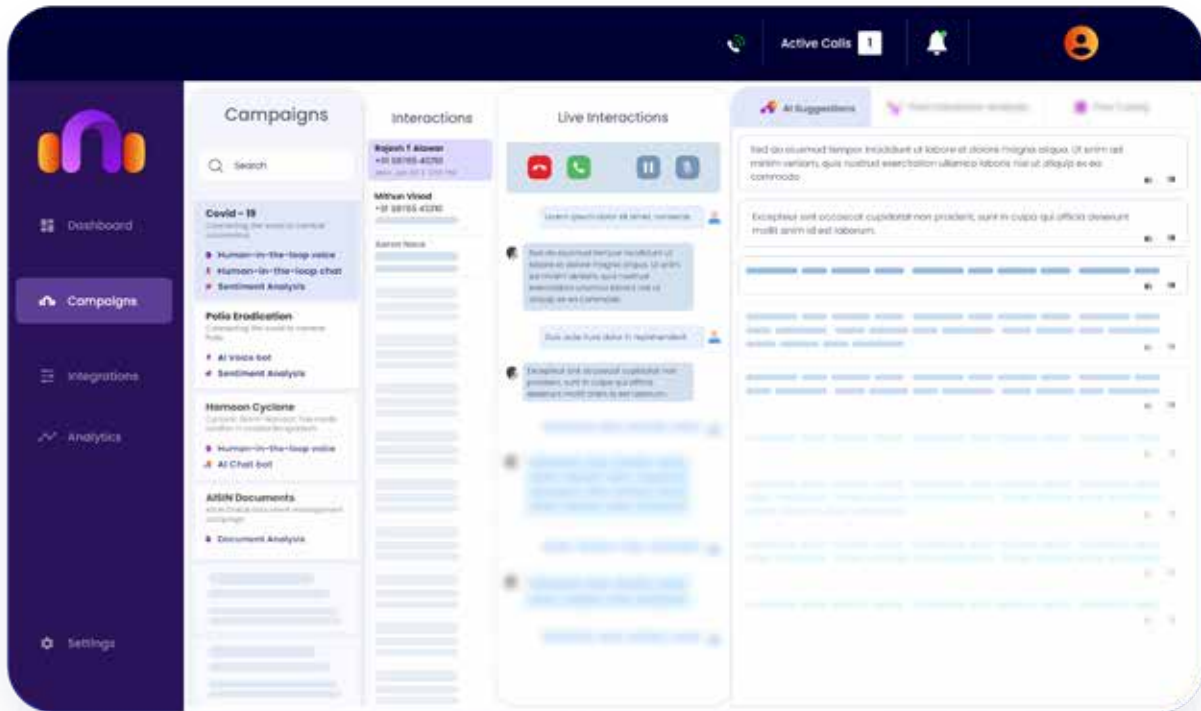
Viplav Valluri
CEO

One of Nuva's standout features is its significant impact on operational metrics. It reduces customer hold times by 40% and boosts customer satisfaction by an impressive 60-80%. These improvements are transformative changes that enhance the overall customer experience, leading to higher retention rates and positive customer feedback.

Proposed Resolution and Benefits:

Leveraging proprietary AI technology, Nuva addresses core industry challenges by integrating **advanced speech recognition (ASR)** and **text-to-speech (TTS) capabilities**, combined with **natural language processing (NLP)** for text and **optical character recognition (OCR)** in image processing. This composite AI solution enables Nuva to process and analyse data from text, speech, and images simultaneously, providing **real-time suggestions** for quick issue resolution.

The offered solutions are highly **customisable** and support **multiple Indian languages**, allowing for flexibility to train on customer-specific data. This



adaptability enables telecom companies to create unique and personalised customer experiences. By integrating these capabilities, Nuva acts as a comprehensive solution for all AI needs. With its ability to interpret and respond in real-time, every customer interaction is smooth, efficient, and tailored to individual needs, thereby boosting customer satisfaction and retention.

Impact Assessment:

Nuva, currently **manages 80-100 concurrent calls daily, serving approximately 6000 customers and**

processing 1.8 million seconds of speech data. This scale demonstrates its robust capacity to handle significant volumes efficiently and effectively. Nuva successfully completed a **major integration** with one of India's largest telecom providers, significantly enhancing the infrastructure and capabilities. As a result, Nuva is now **equipped to manage over 2,000 concurrent calls**, ready to scale further and improve service delivery. This expansion amplifies the operational capacity and solidifies the impact of Nuva within the telecom sector.

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ROADVISION AI



Revolutionizing Road Infrastructure Management with AI and Digital Twins

Company at a Glance:

RoadVision AI is an Infra-Tech startup utilizing Artificial Intelligence and Digital Twins to automate and optimize road operation and maintenance, improve road safety, and provide data-driven insights for efficient road infrastructure management.

The core of the project lies in a proprietary Computer Vision-powered AI engine that automates visual road survey data processing and analysis. This engine can identify road conditions, classify them based on type and severity, calculate pavement distress ratings, and detect lane markings, road signage, advertisements, and other road inventory for effective road maintenance.

Solution Breakdown:

The project utilizes a sophisticated tech stack that leverages AI for pattern recognition, GIS for spatial data visualization, and a user-centric platform for visualization and analysis of reports. The tech stack includes a mobile app for data acquisition, an AI-centric DataStudio for processing, and a GIS platform that enables user interaction with processed data, GIS-mapped results, and predictive analytics insights.

The project's design emphasizes intuitiveness and compatibility with existing road management infrastructures. The tools and libraries utilized in the development of RoadVision AI include React.js, Flask, MongoDB, AWS, Flutter, PyTorch, and OpenCV.

- **AI Engine:** The heart of RoadVision AI's solution is its AI engine which can process survey data, classify road conditions, and identify road distresses with high accuracy. Trained on a vast dataset of road information, the engine



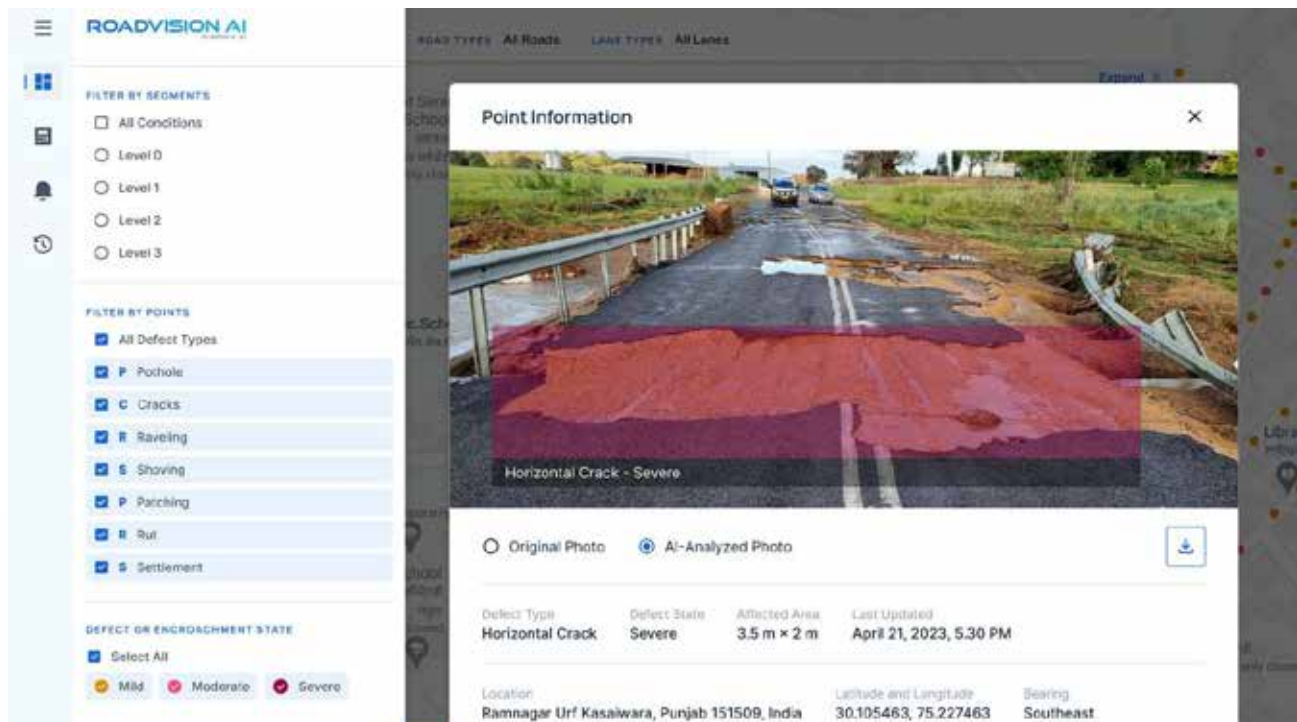
Shubham Kanojia
CTO

Hardik Dave
Founder &
CEO

Rushabh M.
CBO

can detect various types of distress levels and assess pavement conditions.

- **Data Collection Mechanism:** The solution includes an app-based data collection mechanism that effortlessly gathers visual, location, and roughness data essential for analyzing road conditions and maintenance requirements.
- **GIS-Based Web Interface:** A user-friendly GIS-based web interface complements the AI engine by enabling intuitive visualization of Digital Twins, data-driven analytics, and collaborative monitoring of road infrastructure.
- **Identifying the Challenge:** The manual methods of road maintenance surveys are inefficient, time-consuming, and often lead to inadequate insights for effective decision-making. Traditional road safety audits rely on manual data collection, spreadsheet analysis, and subjective engineering judgments, resulting in suboptimal budgeting and maintenance decisions. Road infrastructure in many regions, including India, suffers from poor conditions that contribute to high rates of road accidents and fatalities.



Proposed Resolution and Benefits:

RoadVision AI's unique value proposition lies in its proprietary AI engine which automates road survey data processing and analysis. The capabilities of the AI engine include identifying road conditions, classifying distress types and sizes, calculating pavement distress ratings according to industry and regulatory standards, as well as detecting and cataloging lane markings, road signage, advertisements, and other road inventory and safety assets in compliance with guidelines.

- **Automation of Road Maintenance Surveys:** RoadVision AI solution aims to automate manual road maintenance surveys by introducing a comprehensive system comprising an app-based data collection mechanism, a powerful AI engine, and a user-friendly web interface.
- **Improved Road Safety:** By leveraging AI and Digital Twins, the solution aims to enhance

road safety by providing accurate and timely information on road conditions, distress levels, and necessary maintenance measures.

- **Data-Driven Decision-Making:** The solution will facilitate data-driven decision-making for road infrastructure management, enabling authorities to prioritize maintenance tasks, allocate resources efficiently, and enhance overall road quality.

Impact Assessment:

By leveraging state-of-the-art AI technology and Digital Twins, RoadVision AI can potentially revolutionize road infrastructure management, improve road safety, and contribute to achieving global Sustainable Development Goals related to road safety. The solution has the potential to significantly reduce road accidents, fatalities, and socio-economic losses associated with poor road conditions.

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REVOLUTIONIZING RIGHT TO INFORMATION (RTI) ACCESS WITH AN RTI BOT

RTIwala
Empowering the masses...

Company at a Glance:

RTIwala's RTI Bot is an AI-powered solution that streamlines the drafting and filing of expert-level applications, appeals, and documents with an impressive 92% effectiveness rate. The system efficiently identifies the appropriate PIO or government authority through keywords, a 6-digit area PIN, or potentially GPS coordinates in the future. The RTI Bot automates the process at 1/10th of the market cost and can retrieve and index files in any format and language instantly, enhancing accessibility and efficiency for users.



Sumeet Mahendra
Founder and CEO

Kritika Mahendra
Co-Founder & COO

Identifying the Challenge:

The challenge lies in the high rate of ineffective RTI applications and the lack of accessibility to essential government information, leading to citizens resorting to corrupt practices to obtain necessary documents. RTIwala aimed to address these challenges by providing a cost-effective and efficient solution that leverages AI technology to empower users to exercise their legal rights effectively.

Solution Breakdown:

In a country where a large percentage of individuals have not utilized their Right to Information effectively, RTIwala identified the challenge of rejection, incompleteness, or lack of response for RTI applications. This led to citizens resorting to paying bribes for essential documents and information. By empowering individuals and corporations through legal solutions and leveraging AI technology, RTIwala aimed to democratize access to valuable government information with a success rate of over 92%. The RTI Bot not only simplifies the application process but also provides pre-existing information to users, saving significant time and resources.

Proposed Resolution and Benefits:

RTIwala is a VC-backed legal-tech startup. RTIwala's solution involved the development of the RTI Bot, an AI-based tool that simplifies the drafting and filing of applications, appeals, and documents related to the Right to Information. Through advanced algorithms and automation, the system identifies the relevant government authority, significantly reducing processing time and costs for users.

It utilized natural language processing (NLP) and machine learning (ML) models for drafting and document retrieval, integrated with geolocation APIs for PIO identification. The system runs on a cloud-based infrastructure, ensuring scalability and rapid deployment, with a focus on user-friendly interfaces and secure data handling.

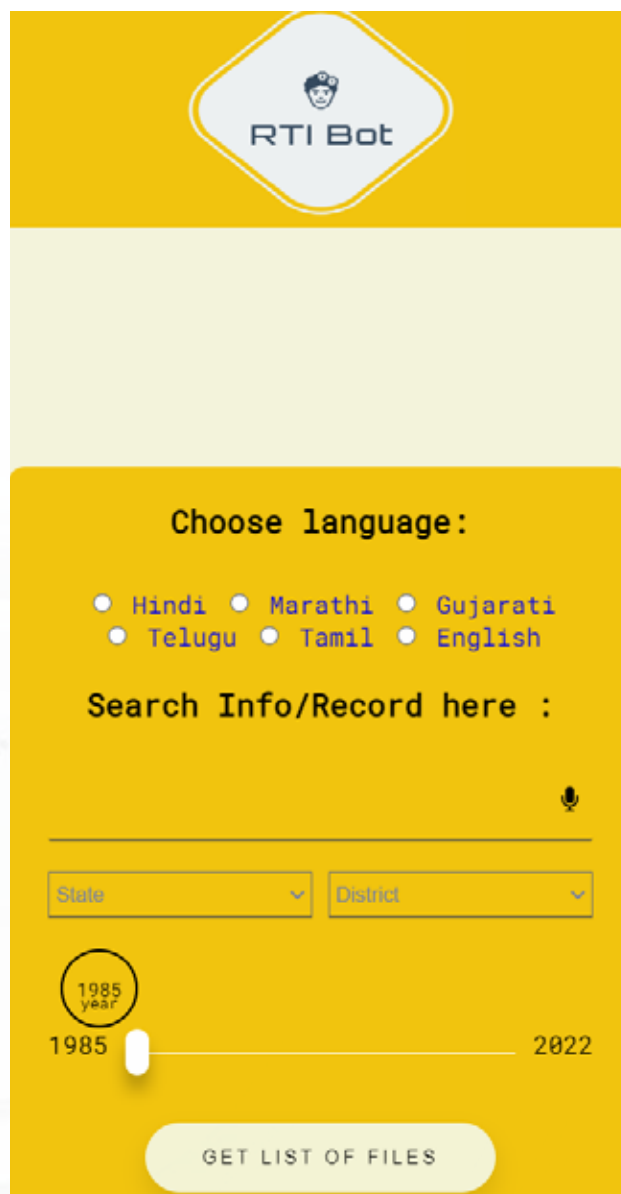
The RTI Bot also enables users to access a user-generated database of valuable information, further enhancing governance and transparency. By providing these services at a fraction of the market cost and in a matter of minutes, RTIwala

aims to revolutionize the process of accessing government information, empowering individuals and corporations alike. Think of it as a 'Google' for the significant information that exists but not available on the internet i.e., records related to land and property, education, health, and other such segments and industries.

Impact Assessment:

The implementation of RTIwala's RTI Bot has resulted in a remarkable 93% success rate, drastically reducing the time required to draft applications from 20 minutes to under 10 seconds. Users can now avail expert-level legal services at a significantly reduced cost, making the process of accessing government information more efficient and inclusive.

By adhering to Responsible AI principles, including fairness, transparency, accountability, privacy, and reliability, RTIwala ensures that its AI-driven solution operates ethically and delivers high-quality services to a broad user base. The system's effectiveness and speed have not only simplified the RTI filing process but also enhanced accessibility and efficiency, marking a significant milestone in the realm of legal technology and governance.



RTI Bot

Choose language :

☐ Hindi ☐ Marathi ☐ Gujarati
☐ Telugu ☐ Tamil ☐ English

Search Info/Record here :

State District

1985 year

1985 2022

GET LIST OF FILES

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SAMAJH AI



Advancing Video Comprehension with AI Technology

Company at a Glance:

Samajh AI is a leading video comprehension company, utilizing an advanced AI-driven CCTV video platform to analyze, identify, and comprehend various objects, actions, or patterns within video footage. The platform empowers users to efficiently search, detect, and comprehend events, providing accurate insights for enhanced security, analytics, and operational improvements.



Chetan Bansiwala
CEO

Dhruv Singh
Head BD

Identifying the Challenge:

Samajh AI has successfully addressed key challenges within the field of video analysis and comprehension, including:



Manual Video Review: The time-consuming and error-prone process of manually reviewing hours of CCTV footage is efficiently automated by Samajh AI's platform, enabling accurate detection and retrieval of relevant footage.



Data Overload: Organizations often struggle with the vast amount of data generated by surveillance systems. Samajh AI's powerful algorithms process and analyze this data at scale, providing concise insights and highlighting critical information.



Security Gaps: By offering real-time alerts and pattern recognition, Samajh AI enhances security monitoring and reduces the chances of overlooking vital events, thus minimizing security gaps.



Unstructured Data: Surveillance videos are unstructured and difficult to analyze using conventional methods. Samajh AI's platform structures this data, making it searchable and analyzable, unlocking actionable insights that would otherwise remain hidden.



Cross-Industry Applicability: Samajh AI provides a versatile platform capable of adapting to and solving varied business-specific challenges through customizable features, catering to diverse needs such as traffic management, retail analytics, and security.

Proposed Resolution and Benefits:

Samajh AI effectively resolves these challenges by leveraging advanced AI algorithms in its video comprehension platform. The system processes vast amounts of CCTV footage in real-time, identifying and classifying objects, actions, and patterns with precision. The AI-powered platform automates the detection and retrieval of critical events, reducing the need for manual searching and minimizing the risk of human error. The platform ensures security monitoring through customized real-time alerts, scalable search capabilities, and versatile cross-industry applications.

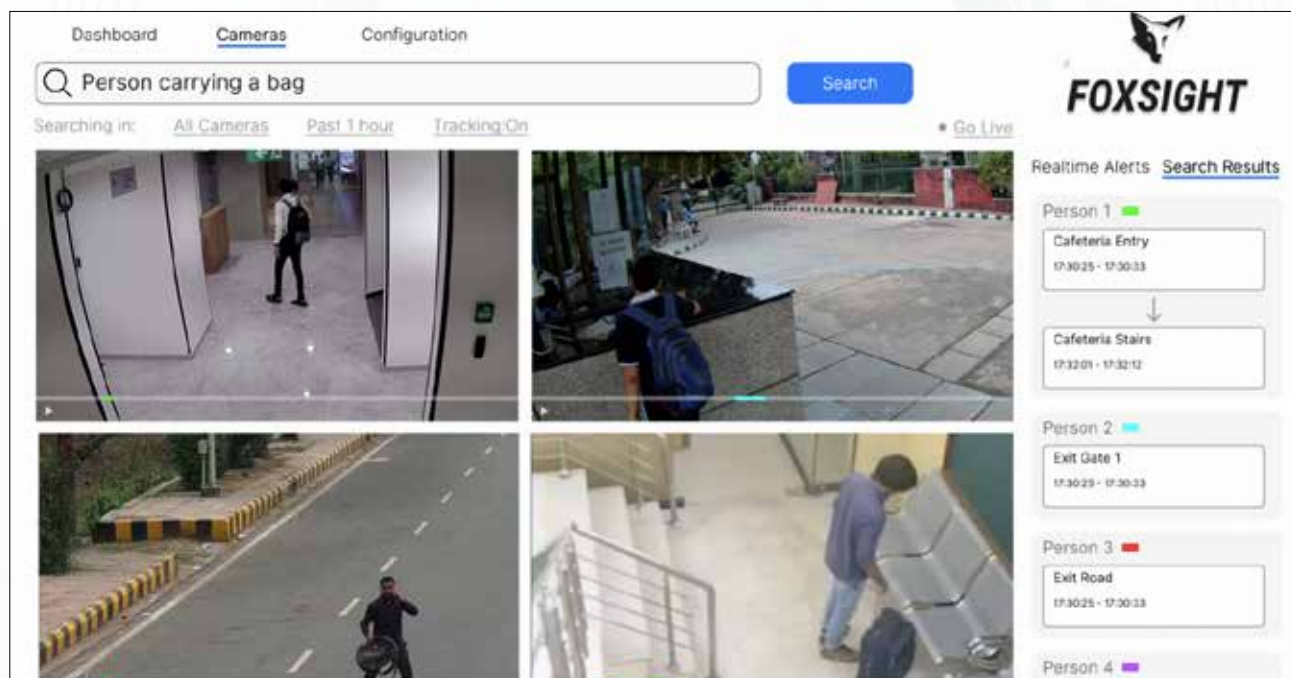
In terms of technology used, Samajh AI employs a range of cutting-edge technologies to deliver accurate and efficient video comprehension, including computer vision, machine learning & deep learning, and Natural Language Processing (NLP). This AI-driven platform allows visitors to input

specific search queries to find particular objects or events within a vast amount of pre-recorded footage, demonstrating the search and retrieval power of the platform.

Samajh AI incorporates Responsible AI aspects by ensuring privacy and security through encryption protocols, inclusion and fairness through AI model training on diverse datasets, and transparency and accountability by providing explainable insights to users.

Impact Assessment:

The impact of Samajh AI's technology includes enhanced security monitoring by reducing manual review times by up to 80%, enabling swift identification and response to threats. Additionally, the platform has facilitated streamlined traffic analysis and congestion prediction for city authorities, resulting in a 25% reduction in bottlenecks.



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AI-BASED TOOL FOR NON-INVASIVE SCREENING AND MONITORING OF ANEMIA



Company at a Glance:

The Company aims to address the high prevalence of anemia in vulnerable populations, such as children, and pregnant, and lactating women, in India through the development of an AI-based mobile application. The application utilizes a deep learning neural network to predict hemoglobin levels through the analysis of conjunctiva images, providing a non-invasive, easily deployable, and immediate screening solution for anemia.

Identifying the Challenge:

The prevalence of anemia in India is 40%, one of the highest in the world. It is especially prevalent in vulnerable populations such as children, pregnant and lactating women where the prevalence is as high as 50%. This poses significant health implications, necessitating a cost-effective, non-invasive, and scalable screening solution.

The development of this deep learning neural network utilized a vast dataset of 25,000 field-collected data points, distinct from publicly available resources. While facing competition from non-invasive hardware products like ORSENSE and FERROSENS, which leverage Spectral/Light-based technology and Measure ZnPP instead of hemoglobin (HB), there are challenges related to mandatory hardware usage leading to capital costs, maintenance, and transportation requirements, as well as the need for sensor replacements for a few hundred tests, posing logistic and cost difficulties.

Solution Breakdown:

Hemoglobin, is essential for transporting oxygen throughout the body and is crucial for maintaining bodily functions. A deficiency in red blood cells or



Pranav Nimmagadda
Founder

hemoglobin results in reduced oxygen-carrying capacity, impacting overall health. Current methods for detecting anemia, such as invasive complete blood count tests, are not only time-consuming and expensive but also require specialized laboratory settings.

Point-of-care devices available in the market for measuring hemoglobin levels add to the complexity, necessitating trained staff to avoid infections and complications. Moreover, the disposal of biohazardous waste, including blood-contaminated needles and strips, poses environmental and health risks, emphasizing the pressing need for non-invasive anemia screening solutions.

The project development involved the collection of 25,000 data points, specifically gathered in the field for the deep learning neural network. The innovation lies in the non-invasive and scalable nature of the AI solution, differentiating it from the indirect competition posed by invasive hardware products in the market. The technology boasts a high level of accuracy, as evidenced by a Mean Absolute Error

(MAE) of 0.69 g/dl when tested against 22,000 actual hemoglobin values.

Proposed Resolution and Benefits:

The AI-based mobile application for anemia screening offers several advantages over traditional invasive methods, including non-invasiveness, ease of use, immediate results, and no consumables requirement. The proposed benefits to governments include improvements in child malnutrition, infant, and maternal mortality rates, cost savings associated with anemia complications, and rapid deployment with minimal end-user training.

The company is the first mover to provide an unparalleled AI solution for hemoglobin prediction. Its distinguishing features include non-invasiveness, eliminating the need for blood withdrawal; user-friendliness, requiring no specialized healthcare expertise; scalability as a mass population tool for anemia screening; immediate point-of-care results; and cost-effectiveness through minimal consumable requirements.

To validate this approach, tests were conducted on 22,000 data points comparing actual HB values with predictions, achieving a highly promising Mean Absolute Error (MAE) of 0.69 g/dl. There are ongoing efforts focused on reducing this error further to reach the necessary level of accuracy for widespread public health screening and monitoring.

Moreover, the AI solution is designed to seamlessly integrate and deploy within governmental institutions like the Rashtriya Bal Swasthya Karyakram (RBSK) under the State Health Ministry, in collaboration with the National Health Mission (NHM), and the Department of Women & Child Welfare at Anganwadi centers, enabling easy adoption and maximizing its impact.

Impact Assessment:

The solution provides a sensitivity of 99.7% for classifying a subject as anemic, 76.5% for moderately anemic, and 75% for severely anemic. The application's accuracy, with an average percentage difference between actual and predicted values of less than 7%, makes it suitable for public health screening and monitoring. The technology is developed using Python for the core algorithm and hosted on a cloud-based platform, making it both reliable and easily accessible.

This project offers a groundbreaking solution to address the prevalence of anemia in vulnerable populations, aligning with the larger objective of improving public health and well-being in India.



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AI-POWERED DIAGNOSIS

The SETV.W Disruption in Healthcare



Company at a Glance:

SETV.W AI is a revolutionary platform leveraging advanced artificial intelligence to transform healthcare diagnostics and data management in India. The system addresses critical challenges in the healthcare sector, such as delayed diagnostics, limited access to medical technologies, and fragmented patient data, ultimately impacting patient care and outcomes.

Identifying the Challenge:

The urgent need for innovative solutions to improve diagnostic accuracy, accessibility, and data management in India's healthcare system is crucial. The existing challenges greatly impact patient care and outcomes, necessitating a comprehensive and innovative approach.

Solution Breakdown/Review:

The healthcare system in India faces significant challenges, including delayed diagnostics, limited access to advanced medical technologies, and fragmented patient data. These factors lead to prolonged suffering, preventable fatalities, and disparities in healthcare quality between urban and rural regions. Additionally, these challenges contribute to inefficiencies, repeated tests, and high healthcare costs. The relentless pressure on



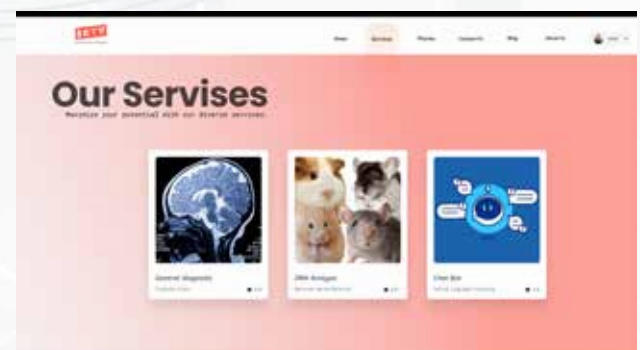
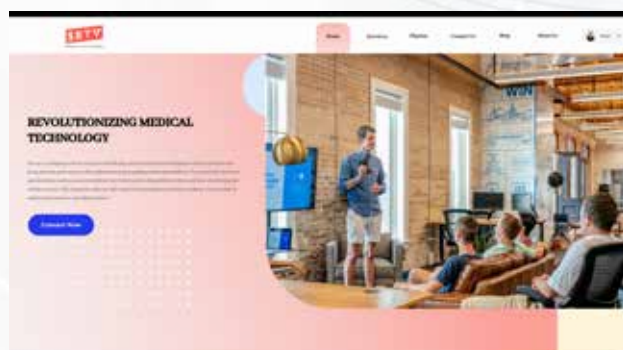
Vaibhav Ram
Founder

healthcare professionals for quick and accurate diagnostics also leads to stress and burnout, compromising the quality of care.

Proposed Resolution and Benefits:

SETV.W AI is revolutionizing healthcare with its state-of-the-art platform, leveraging advanced artificial intelligence for real-time medical data and imaging analysis. The solution aims to drastically reduce diagnostic times, enhance accuracy, and empower healthcare professionals to deliver precise, personalized patient care.

By seamlessly integrating with existing systems, SETV.W AI aims to transform diagnostics and set



a new benchmark for innovation and efficiency in global healthcare. Features like centralized data connectivity, electronic prescription reading, and detailed scan interpretations are designed to alleviate stress on healthcare professionals and improve patient outcomes.

- **Real-Time Diagnostics:** This AI-driven platform provides real-time analysis of medical data and imaging, drastically reducing diagnostic delays. This immediate feedback enables quicker treatment decisions, significantly improving patient outcomes.
- **High Accuracy:** Trained on extensive datasets, the AI algorithms ensure precise diagnostics, minimizing errors and misdiagnoses, particularly in under-resourced areas where access to trained professionals is limited.
- **Centralized Data Connectivity:** SETV.W AI centralizes patient data, making it easily accessible to healthcare providers. This seamless integration with existing IT systems and electronic health records (EHR) ensures efficient data flow and reduces the risk of data loss and miscommunication.
- **Specialized Features:** Madonna: Beyond digitizing handwritten prescriptions, Madonna helps patients find doctors, diagnostic centers, pharmacies, and emergency services (108) based on their symptoms and situation.
- **DNA Analyzer:** Analyzes genetic data for personalized treatment options.
- **Readable Scans:** Provides detailed, easily interpretable scan results, assisting doctors with accurate diagnoses without constant reliance on radiologists.
- **Stress Reduction for Healthcare Professionals:** By automating routine diagnostic tasks, SETV.W AI reduces the workload on doctors and



radiologists, alleviating stress and preventing burnout.

Impact Assessment:

SETV.W AI addresses critical healthcare challenges in India by leveraging advanced artificial intelligence to revolutionize diagnostics and data management. The AI-driven platform provides real-time analysis of medical data and imaging, minimizing errors and misdiagnoses. Additionally, it offers specialized features like digitizing handwritten prescriptions, analyzing genetic data, and providing easily interpretable scan results. The system aims to reduce the workload on doctors and radiologists, thus alleviating stress and preventing burnout. Furthermore, it ensures equitable healthcare access across urban and rural regions, transforming India's healthcare landscape.

The self-built advanced AI and models, complemented by computer vision and natural language processing technologies, distinguish SETV.W AI as a unique and innovative solution. Anticipation and positive responses from individuals who have used the Minimum Viable Product (MVP) and pilot healthcare institutions demonstrate the high potential and widespread anticipation for the solution.

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REVOLUTIONISING EDUCATION WITH AI



Transforming Student Assessment with DeepGrade



Aslam Sherieff
Co-Founder



Swaminathan Ganesan
Co-Founder and CEO



Kannan Ganesan
CTO

Company at a Glance:

Smartail is a pioneering DeepTech company, established in 2019, leverages cutting-edge AI to revolutionize the educational landscape. Smartail addresses critical industry challenges by providing innovative, educator-focused solutions. Their comprehensive suite of AI-powered tools empowers progressive schools and institutions to personalize the learning experience for every student. By tackling prevalent educational issues, Smartail redefines industry standards and fosters a future of data-driven, effective learning.

Identifying the Challenge:

Smartail addresses the challenge of traditional grading methods in education, which often lack efficiency, consistency, and personalised feedback. By leveraging AI-driven assessment tools like Deepgrade, Smartail revolutionises the grading process, providing educators with comprehensive insights into student performance, identifying learning gaps, and enabling tailored instructional strategies. This empowers educators to deliver

personalised learning experiences, leading to improved student outcomes and a more effective education system overall.

Solution Breakdown / Review:

Smartail empowers educators with AI-driven solutions, such as DeepGrade, streamlining assessment processes. DeepGrade automates grading tasks, provides personalised feedback, and identifies learning gaps. It benefits schools by enhancing teacher productivity, enabling data-driven decision-making, and improving student outcomes. With Smartail, schools can efficiently manage assessments, saving time and resources while optimising student learning experiences. With the advanced algorithms, DeepGrade solution automates grading tasks and provides valuable insights to educators.

Proposed Resolution and Benefits:

Deepgrade, Smartail's flagship solution, revolutionises traditional grading practices in schools by harnessing the power of AI. It addresses

the time-consuming and subjective nature of manual grading by automating the process. Using advanced machine learning algorithms, DeepGrade accurately assesses student work, providing fast and unbiased feedback. By analysing patterns and trends in student performance, DeepGrade identifies learning gaps and offers personalised recommendations for improvement. This AI-driven approach saves educators time and enhances the quality and fairness of assessments, ultimately improving student learning outcomes.

Impact Assessment:

Here are some highlights of DeepGrade's achieved scale and overall impact:

- **Scalability:** DeepGrade leverages cutting-edge technology, such as artificial intelligence and machine learning, to scale assessment processes efficiently. The automated grading system can handle large volumes of student work, saving educators valuable time and resources.
- **Personalized Feedback:** Through its sophisticated algorithms, DeepGrade provides personalised feedback to students, offering insights into their strengths and areas for improvement. This personalised approach enhances student learning outcomes by catering to individual needs and learning styles.
- **Objective Assessment:** DeepGrade ensures objectivity in assessment by eliminating biases and inconsistencies commonly associated with human grading. This objectivity fosters fairness and equity in the evaluation process, promoting a more inclusive learning environment for all students.
- **Data-Driven Insights:** By analysing vast amounts of assessment data, DeepGrade generates valuable insights for educators and schools.

These insights help identify trends, track student progress over time, and inform instructional decisions, ultimately leading to more effective teaching practices.

- **Streamlined Workflow:** DeepGrade streamlines the assessment workflow for educators, allowing them to focus more on teaching and less on administrative tasks. Its intuitive interface and user-friendly features simplify the grading process, enabling educators to allocate their time and energy more efficiently.
- **Enhanced Learning Experience:** With DeepGrade, students receive timely feedback on their work, enabling them to reflect on their performance and take proactive steps toward improvement. This continuous feedback loop fosters a growth mindset among students and empowers them to take ownership of their learning journey.
- **Cost-effective Solution:** DeepGrade offers a cost-effective alternative to traditional assessment methods, reducing the need for manual grading and associated overhead costs. Schools can allocate their resources more strategically, investing in other areas that directly benefit student learning and development.



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CREATE, POST, AND OPTIMIZE ADS EFFORTLESSLY WITH SPARKIQ



Company at a Glance:

SparkIQ is an innovative platform that leverages advanced AI technologies to automate and optimize the ad creation and posting process for businesses. By generating compelling ad copy, and visually stunning images, and providing real-time analytics, SparkIQ simplifies digital marketing efforts and ensures high-quality, performance-driven ads across major social media platforms.

Identifying the Challenge:

The traditional ad creation process was manual, time-consuming, and resource-intensive, involving copywriters, designers, and marketers to produce high-quality content. Ensuring compliance with platform standards and optimizing ad performance posed significant challenges for businesses. SparkIQ identified these pain points and aimed to revolutionize the digital marketing landscape by automating and streamlining the ad creation and posting process through AI technologies.

Solution Breakdown:

SparkIQ harnesses a diverse array of cutting-edge technologies to deliver its digital marketing solution. From AI sentiment analysis to machine learning algorithms and color theory principles, SparkIQ integrates various tools to create engaging and relevant ad content. The platform's robust backend infrastructure and user-friendly interface further enhance its capabilities in streamlining marketing processes.

Proposed Resolution and Benefits:

SparkIQ's solution addresses the challenges of manual ad creation by automating the entire process using advanced AI. By generating compelling ad



Umapathi
Founder & CTO

copy, optimizing images, and automating posting on social media channels, SparkIQ saves businesses time and resources while delivering high-quality, performance-driven ads. The platform's real-time analytics and continuous performance optimization capabilities provide actionable insights for maximizing marketing impact and ROI.

Technologies Utilized:

- **AI Sentiment Analysis:** Utilizes AI-driven sentiment analysis to understand and predict audience reactions, ensuring ad copy resonates emotionally with the target audience.
- **Machine Learning with Scikit-learn:** Uses Scikit-learn for predictive analytics to forecast ad performance and optimize content.
- **Color Thief and Color Theory with AI:** Employs Color Thief to extract dominant colors from images and applies AI-based color theory principles to create visually appealing ad designs.
- **Gap Analysis and Object Detection Algorithms:** Utilizes gap analysis to identify content

opportunities and object detection algorithms to ensure relevant and contextually appropriate images.

- **Content Generation with LLAMMA Models:** Utilizes LLAMMA models to power content generation, producing high-quality, engaging ad copy tailored to specific audiences.
- **Backend Infrastructure:** Built on Spring Boot microservices, providing a robust and scalable architecture to handle large volumes of data efficiently.
- **Database Management:** Uses PostgreSQL for reliable and scalable database management, ensuring data integrity and performance.
- **Frontend Development:** Developed using React, offering a seamless and intuitive experience for users.

SparkIQ adheres to Responsible AI guidelines for ethical and transparent implementation. The platform ensures fairness by training AI models on diverse datasets to avoid biases and represent all demographics in the ad content. Users are provided with clear explanations of how AI-generated content is created and optimized, ensuring transparency.

Robust governance structures and regular audits ensure accountability. User privacy and data security are prioritized through stringent data protection measures and compliance with global regulations. The platform is accessible to all users and focuses on cultural sensitivity and inclusivity.

SparkIQ is committed to sustainability by optimizing AI processes for energy efficiency. Stakeholder engagement keeps the platform aligned with



ethical standards. Through incubation in the THub Blitz program and collaboration with Math Lab, SparkIQ has received invaluable support and guidance. Positive feedback from testers validates the platform's ease of use and effectiveness. With a scalable architecture and integration of AI/ML technologies, SparkIQ provides personalized marketing solutions. Adherence to industry standards and Responsible AI principles ensure compliance and continuous improvement based on user feedback.

Impact Assessment:

SparkIQ has achieved significant milestones in scaling and validating its digital marketing solution. The platform's incubation in renowned programs like THub Blitz and collaboration with industry experts have provided invaluable resources and mentorship. Extensive user testing and validation have validated SparkIQ's concept, leading to positive user feedback and adoption. With a scalable architecture built on AI/ML technologies, SparkIQ is market-ready, compliant with industry standards, and continuously improving to meet evolving user needs and industry trends.

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SUBTL.AI

The Future of Generative AI in Enterprise Workflows

{ S Y X P A
E U B H W } . A I
M K N T L

Company at a Glance:

subtl.ai is a private perplexity for enterprises that want to link all of their public/private data to a generative AI agent for answers and actions in the workflow. The service is live for SBI, built out of core research done by the founding team at IIIT-Hyderabad, which is the largest AI research group in India.

Identifying the Challenge:

Enterprises that want to use generative AI on all of their data are having difficulty in finding an appropriate solution. There is no clear choice that offers a **cost-effective solution** and which can **run privately** on their own cloud. Security of sensitive details is a major concern and hence public or largely available AI solutions pose a **security**



Vishnu
CEO

threat. Approximately 80% of enterprise CXOs also see trust of the generative output as the top blocker for choosing a vendor.

FOUNDING TEAM



VISHNU
RAMESH

CEO
BITS-Pilani



MANISH
SHRIVASTAVA

Chief Scientist
PhD IIIT B



PRANAV
GOYAL

CTO
Masters
IIIT-H



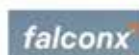
VAIBHAV
SHARMA

Partnerships
ex-Zeta
ex-Amex



GANESH
KATRAPATI

Lead Researcher
PhD IIIT-H



ANSWERED WITH EXACT PROOF, INSTANTLY

Branch manager asks her question

Can you use shadow credit to clear local cheques?

Based on all the data I found 10 answers in 0.21 seconds!

Yes, according to the documents provided, banks are permitted to allow the usage of shadow credit for clearing local cheques immediately after the closure of relative return clearing. This means that customers can utilize the funds from the cleared cheques before the physical receipt of the cheques, subject to usual safeguards. Therefore, shadow credit can be used to clear local cheques.

1412 Delays in Cheque Clearing - Case No. 82 of 2006 before National Consumer Disputes Redressal Commission For local cheques, credit and debit shall be given on the same day or at the most the next day of their presentation in clearing. Ideally, in respect of local clearing, banks shall permit usage of the shadow credit afforded to the customer accounts immediately after closure of relative return clearing and in any case withdrawal shall be allowed on the same day or maximum within an hour of commencement of business on the next working day, subject to usual safeguards. Timeframe for collection of cheques drawn on State Capitals / major cities / other locations to be 7/10/14 days respectively.

Ask me anything about the knowledge in this repository

WHAT SBI DID...

CONNECT SOURCES/ SAAS

SUBTL READS AND ORGANISES THE DATA

INSTANT ANSWERS, LINKS TO PROOF, MILLION+ PAGES

AUTOMATE TASKS LIKE
 + ADD/UPDATE TICKETS
 + FILL FORMS
 + CREATE NOTES / BRIEFS

Solution Breakdown / Review:

subtl.ai is the only solution that is live for a bank in production on their private cloud. It is built out of core research. Thus, the retrieval engine is efficient enough to work with small generative models and promises unmatched speed, efficiency, and security standards.

Proposed Resolution and Benefits:

Through core research done by the founding team from IIIT-Hyderabad, subtl.ai has built an embedding model that brings results that addresses the question or doubt of the user. It also highlights a big flaw in the contemporary semantic search that can only find related information,

but not the right information. This causes the Generative AIs based on search engines to have hallucinations.

Subtl.ai's knowledge agent was built fully in-house and ground up to build a light system that can deliver responses with high trust and transparency, ensuring maximum standards of trust and security. It prevents Generative AI hallucinations by ensuring only true and relevant facts that are used as data source for the AI.

Impact Assessment:

Subtl.ai is live privately for SBI and has over 500 users onboarded. It is actively scaling across BFSI and fintechs.

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STELLA 2.0



Revolutionising Mental Health Care with AI-Driven Solutions



Ritu Mehrotra
Founder & CEO



Shumita Kakkar
Founder, Director & COO



Sourav Banerjee
Founder and CTO

Company at a Glance:

Clinicians often spend up to 40% of their time on documentation which distracts them from patient care. Additionally, researching drug interactions is extensive, complex, and causes inefficiency in clinical workflows. Clinical CoPilot by United We Care actively recommends treatment options by offering real-time clinical decision support powered by advanced AI and instant access to the latest overall clinical research and drug interaction data. The integration of Clinical CoPilot and Stella within the healthcare systems facilitates precise prediction of potential complications, decreases the likelihood of errors, and cuts operational costs, treatment reactions, and risks of relapse by leveraging a Spatio-Temporal Graph Neural Network.

Identifying the Challenge:

Stella 2.0 focuses on the high prevalence of mental health issues such as depression, stress, and anxiety among corporate employees, which significantly affects their productivity, work-life balance, and physical health. Over 40% of employees in India report these issues, with many experiencing

related insomnia and acknowledging the urgent need for effective mental health solutions. Stella 2.0 leverages advanced technology to enhance the accessibility, personalization, and effectiveness of mental health care.

Solution Breakdown / Review:

An Innovative 360-degree mental health product that combines advanced technology with comprehensive clinical support. Stella 2.0 is integrated with a Spatio-Temporal Graph Neural Network that analyses causality in mental health conditions, forecasting potential future complications, treatment responses, and relapse risks. It is highly personalised and has predictive care plans. Adherence to HIPAA, DPDPA 2023, and other compliance standards demonstrates a strong commitment to user privacy and data security.

Proposed Resolution and Benefits:

AI-driven solutions like Stella 2.0 offer a transformative approach to mental health care by:

- **Real-Time Emotional Detection and Response:**
AI algorithms analyze real-time user interactions

to detect emotional states, providing immediate and appropriate responses critical for users in distress.

- **Personalized Support:** Through machine learning, Stella 2.0 personalizes interactions based on individual profiles, adapting support to enhance the effectiveness of mental health care.
- **Scalability Across Languages and Cultures:** AI supports 29 languages, offering a culturally sensitive approach to mental health care that addresses accessibility issues globally.
- **Predictive Analytics:** AI predicts potential mental health issues using historical data and ongoing interactions, supporting early and cost-effective intervention strategies.
- **Continuous Learning and Improvement:** Stella 2.0's AI models continuously learn from new data, improving diagnostics and interventions while staying updated with the latest mental health research.
- **Integration and Automation:** AI integrates Stella 2.0 into existing systems, automating routine mental health care tasks to reduce the burden on human therapists.
- **Evidence-Based Responses:** Grounded in Cognitive Behavioural Therapy, AI ensures Stella 2.0's responses are immediate, scientifically validated and enhance care quality.

Impact Assessment

- **Revenue Optimization:** Stella 2.0 and related services have been implemented with measurable success. The solution has enabled

new revenue streams through innovative and tailored mental health products.

- **Cost Optimization:** The implementation of Stella 2.0 has contributed to cost optimization by reducing the need for extensive human resources in preliminary mental health support and diagnostics, allowing more scalable and cost-effective service provision.
- **Customer Experience:** Stella 2.0 improves customer experience by providing immediate, personalised, and accessible mental health support. The feedback mechanisms and integration with health and wellness programs contribute to a holistic service that values user feedback and continuous improvement.
- **Other Metrics (e.g., Clinical Efficacy, User Engagement):** Clinical efficacy has seen improvements with Stella 2.0's AI capabilities. User engagement is significantly higher compared to traditional methods, with deep analytics that allow for personalised user journeys and increased interaction frequency.



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ZODHYA AI

Driven Revolutionary Energy Management



Company at a Glance:

Zodhya Technologies are developing a plug-in Artificial Intelligence technology that reduces energy bills and lowers emissions for commercial buildings and industries by 30%. The project has successfully saved 250,000 units of electricity and have lowered 180,000 kg CO2 emissions till now.

Identifying the Challenge:

Commercial spaces and buildings spend up to 30% of their operative expenditure on energy bills, which is the next highest after rentals. Another challenge presented itself post-pandemic and inflation effects. COOs & Facility managers were under immense pressure to **reduce costs and improve operational efficiency**. There was an increased focus to look at ways of **reducing the carbon footprint**. This led to the thought process of an innovative solution that eventually formed the ideology at Zodhya.

Solution Breakdown/Review:

Most of the available contemporary solutions only provide IoT and/or analytics to your usage. For example, a post-event analysis rather than during the usage, involving either high CAPEX or heavy infra changes. However, there isn't a solution where companies can benefit immediately.

Zodhya's devices, Saver and Soul, enable a reduction in energy bills right from Day 1, with ZERO operational changes. It can also be implemented within 30 minutes and is retrofittable for most spaces.



**Chinnasetti
Sharath Mani**
Co-Founder

Rohith Pallerla
Founder & CEO

Adityanath D
Co-Founder &
CMO

Proposed Resolution and Benefits:

Zodhya AI tech is a combination of Saver and Soul:



Soul

An IoT device operating on a telecom network, manages electrical aspects of any given space/ zone/ equipment using Machine Learning, including detection of repairs and hotspots, load optimisation using renewables



Saver

Patented device that works based on an AI-based algorithm that optimizes the consumption of HVAC/ cooling/ heating systems. An exclusive product, SaverX, can also be integrated with the existing BMS.

Impact Assessment:

Zodhya is successfully working with 30 clients currently. The impact of this useful and innovative solution has aided in saving 250,000 units of electricity and has also reduced the emissions by 180,000 kg CO₂.



**BUILDING
MANAGEMENT
SYSTEMS**



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Enterprise

DRIVING EFFICIENCY ACROSS DOMAINS

Aaseya's Comprehensive Digital Transformation Solutions



Pankaj Jain
CEO

Solution Name: Aaseya Inspection Solution (AIS)

Company: Aaseya IT Services Limited

Sector: IT and BPM

Company at a Glance:

Aaseya, a subsidiary of Yash Technologies, is a leading professional services company specializing in Digital Transformation. They excel in the rapid delivery of Low-Code, AI, and Digital Process Automation Technologies. Aaseya's consultants specialize in agile delivery across three leading Software Platforms, Pega, OutSystems, and Camunda, delivering accelerated time-to-business value for their clients.

Identifying the Challenge:

The challenge was to modernize and standardize inspection processes across multiple channels, ensuring compliance with regulatory standards while enhancing operational efficiency.

Solution Breakdown:

Aaseya offers a range of comprehensive solutions, including inspection, commercial lending, investment management, healthcare pre-authorization, and permits. These solutions cater to various industry sectors, addressing precise challenges and optimizing processes.

Aaseya's AIS leverages the Pega Infinity low-code Platform and AI to enhance organizational

adaptability to evolving regulations and quality standards. The solution incorporates two key AI features: Visual Inspection and Smart Routing, optimizing efficiency in quality control processes and logistics operations.

Proposed Resolution & Benefits:

Aaseya's AIS addressed this challenge by introducing cutting-edge image recognition technology for Visual Inspection and dynamic resource routing for Smart Routing. This resulted in increased efficiency, reduced human error, and improved consistency in quality standards. The implementation of workflows, mobile applications for field inspectors, and penalty tracking mechanisms further enhanced the solution's effectiveness.

Aaseya's AIS upholds Responsible AI principles, including Inclusivity, Non-Discrimination, Reliability & Safety, Accountability, and Reinforcement of Positive Human Values and Compliance, ensuring ethical and fair use of AI technologies in the inspection processes.



Impact Assessment:

The implementation of AI in the lease management process yielded notable results:

Implemented across 285 Municipal Councils for approximately 6000 users, resulting in 3+ million cases in 2022.

Notable profitability increase of 10% and a 15% reduction in operation costs in the first year post-implementation.

Over 2 billion in local currency collected through penalties, surpassing ROI expectations.

The other domain-specific solutions similarly contributed to substantial operational improvements and compliance adherence within their respective industries.






Streamline Inspections and Enhance Compliance with the Aaseya Inspection Solution

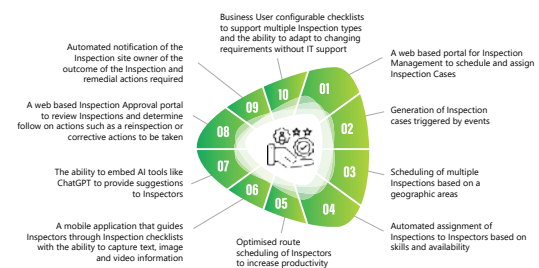
Regular workplace, equipment, and process inspections are crucial for many organisations and government departments to fulfill their safety, environmental, and regulatory obligations. Inspections prevent incidents and help identify opportunities to make organisations and services more efficient and cost-effective.

However, many inspections are scheduled and conducted without technology support, using manual processes and paper-based forms, which leads to inconsistency, errors and increased risk and cost to an organisation.

With the Aaseya Inspection Solution (AIS), a cloud based and mobile application, these challenges can be addressed. In a recent implementation AIS delivered:

-  **20% increase in Inspector productivity**
-  **Cost recoveries/avoidance significantly in excess of the project costs**
-  **Increased compliance with regulations with the consequential benefits and reduced organizational risk**

AIS delivers these benefits through:



Case Study

A prestigious and strategic project enabled a Middle Eastern government to conduct inspections (including health and market inspections) using mobile devices and tablets. The system is fully integrated with licensing, GIS, objections, and payment systems to provide a seamless experience. The system is being used by 3 million users and more than 6 million inspections have been carried out successfully.

AIS is delivered on a leading low-code platform, which means that it is rapid to deploy, easy to integrate, and fast to customise to any organisation's specific needs, whilst providing all the key capabilities such as Performance, Security, Scalability and multi device support.



For more information visit us at www.aaseya.com or email info@aaseya.com

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AVEVA'S VISION

AI Assistant Revolutionizes Industrial Monitoring

AVEVA



Girish Iyer
R&D Director

Solution Name: Aveva Vision AI Assistant

Company: Aveva Solutions India LLP

Sector: Energy & Utilities

Company at a Glance:

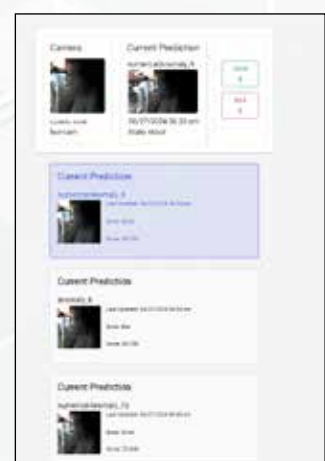
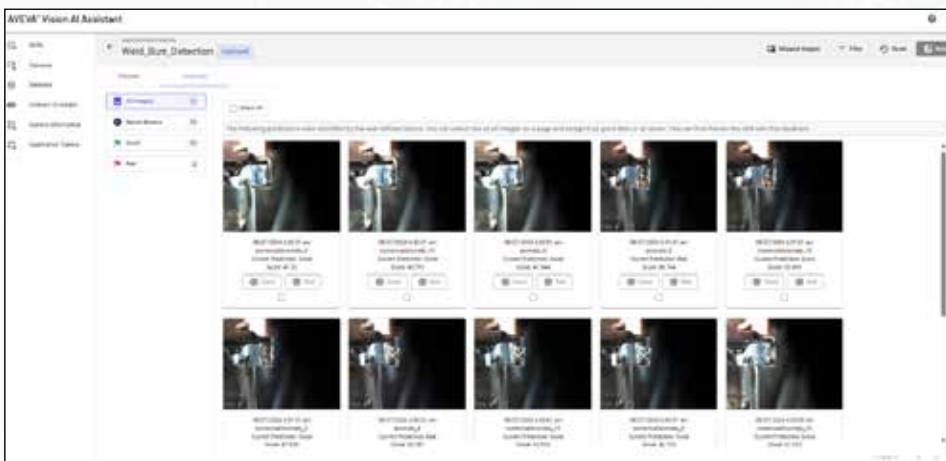
AVEVA, a global leader in industrial software, leverages its secure industrial cloud platform and AI-enriched insights to empower enterprises across over 100 countries in delivering essential resources.

With a focus on efficient engineering and optimized operations, AVEVA supports over 20,000 enterprises and drives growth and sustainability through trusted information and innovative solutions. Key products/solutions being developed in India include Asset Information Management, AVEVA Engineering, AVEVA ERM, AVEVA Predictive Analytics, and the transformative AVEVA Vision AI Assistant.

Said to be one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners, and 5,700 certified developers. With operations around the globe, AVEVA is headquartered in Cambridge, UK.

Identifying the Challenge:

Industrial facilities face the challenge of efficiently monitoring and maintaining critical equipment to prevent downtime and revenue loss. The need for early detection of issues and proactive maintenance is crucial to optimize operations and resource utilization.



BIZACUITY'S GAMWIT

AI Solutions for Marketing and Compliance in Betting



Nishant Jain
Director

Solution Name: GAMWIT

Company: BizAcuity Solutions Pvt Ltd

Sector: IT and BPM/AI

Company at a Glance:

BizAcuity is a data analytics and IT services company established in 2011 with one end goal: enabling businesses with actionable insights that drive real impact. They help their clients transcend their most burning challenges by unlocking the true potential hidden in their data with the help of the latest technology in the market combined with BizAcuity's extensive expertise across domains.

Identifying the Challenge:

The sports & gaming industry struggles with integrating and analysing features for player/customer insights, inefficiencies in algorithm selection, and compliance with regulations. Safeguarding against PII misuse and gambling addiction is crucial. Traditional model training is time-consuming, and identifying key factors behind high churn and low lifetime value remains challenging.

Additionally, the marketing team faces challenges in managing affiliates to identify those driving high-value players and complying with stringent Gambling Commission guidelines, requiring a massive KYC update for customers.

Solution Breakdown / Review:

BizAcuity Solutions have built an AI solution in India called "GAMWIT" which caters to the challenges faced

by teams such as marketing and looks after risk and compliance in the Casino and Sports Betting industry.

Proposed Resolution and Benefits:

GAMWIT is an enterprise gaming analytics platform that offers a suite of pre-built predictive AI models to address marketing, compliance, risk, customer retention concerns in the casino, poker, and sports-betting industry.

AI helps organisations in the following ways:

- Enhance player/customer experience with a 360-degree view, because of 500+ in-built features that can be analysed by AI
- Automatically select the best Machine Learning algorithm based on the client's data with Auto-ML capability to deliver the best accuracy without any manual intervention, hassle and wastage of time and resources
- Safeguard organisations with compliance checks like- UKGC (UK Gambling Commission) Norms with no PII (Personally Identifiable Information) data, Responsible Gaming alerts for addicted players or the ones continuously losing money, new-edge Anti-Money Laundering frauds etc
- Model training of historical data is done in just 4 weeks of time instead of 12-16 weeks, which is the usual time in a traditional method



e)Uniquely identifies the reason/top variables behind High Churn, Low LTV, Low Frequency etc for each client

Impact Assessment:

As observed in a case study, results of applying GAMWIT were transformative. Player acquisition strategies were recalibrated to focus on affiliates generating high LTV players, while cost optimization efforts included renegotiating deals with affiliates associated with lower LTV players. Daily predictions on 500K+ players opened avenues for enhanced player retention through strategic cross-selling and up-selling opportunities.

The impact was profound, boasting a 93.7% accuracy in identifying duplicate accounts sourced by affiliates. Additionally, there was a staggering 75% reduction in time for going live in the market, positioning the client as a frontrunner in the highly competitive iGaming landscape.

The case study highlights the immediate solutions to pressing challenges and underscores the client's strategic positioning for sustained success, armed with data-driven insights, AI/ML-driven predictions, and an optimised approach to affiliate partnerships.

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REDEFINING REAL ESTATE MANAGEMENT

A Technological Revolution with CBRE

CBRE



Apratim Mitra

Group Vice President,
Digital & Technology

Solution Name: CBRE Digital and Technology

Company: CBRE South Asia Private Limited

Sector: IT and BPM

Company at a Glance:

CBRE's Digital and Technology (D&T) organization is spearheading the transformation of the real estate industry through cutting-edge software solutions. Their innovative products have redefined real estate management, providing seamless experiences for both, internal and external clients. CBRE's award-winning reputation as the industry's top brand and its consistent recognition as one of Fortune's "Most Admired Companies" reflects its commitment to excellence in technology and service.

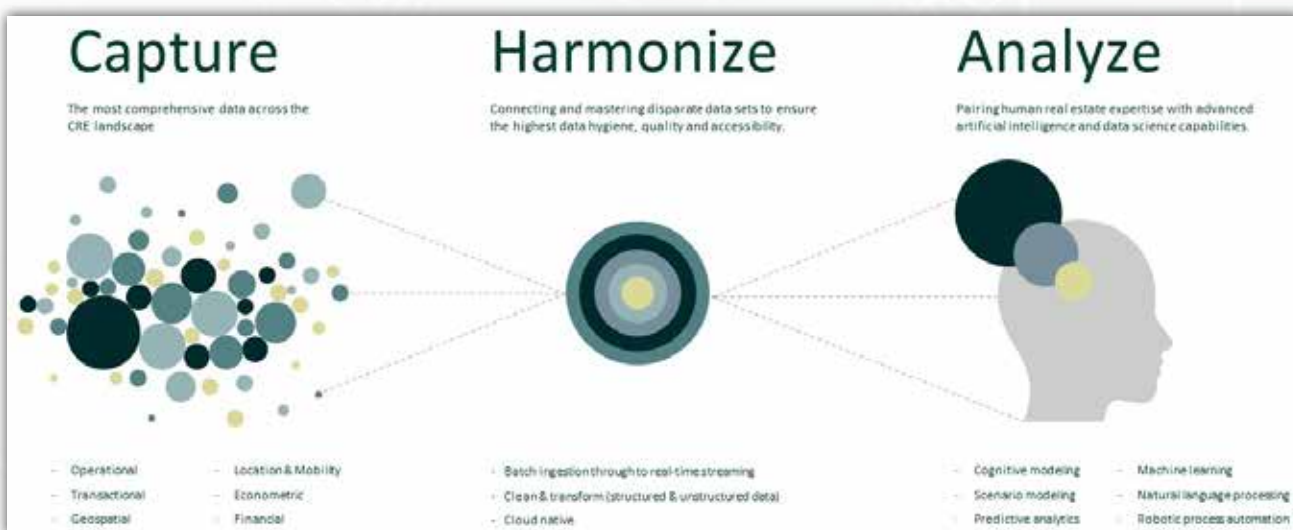
Identifying the Challenge:

Traditionally, extracting lease elements from contract documents required extensive manual effort, with

each document of 50 to 60 pages consuming a full day for extraction. This labor-intensive process posed challenges in terms of time consumption and accuracy, necessitating a more streamlined and accurate solution.

Solution Breakdown:

Within the realm of real estate management, CBRE offers a range of solutions spanning property and facilities management, lease brokerage, valuations, project management, and real estate investments. Emphasizing reliability, safety, privacy, security, and accountability, CBRE prioritizes role-based access controls, manual testing, and intelligent workflows to ensure the efficiency and integrity of its software solutions.



Proposed Resolution and Benefits:

Employing the power of AI, CBRE introduced a solution leveraging Lease Lifecycle Management (LLM) to automate lease element extraction, document classification, and query

summarization. By integrating AI technology into the workflow, CBRE aimed to significantly enhance accuracy, reduce manual efforts, and empower reviewers with advanced document interpretation features.



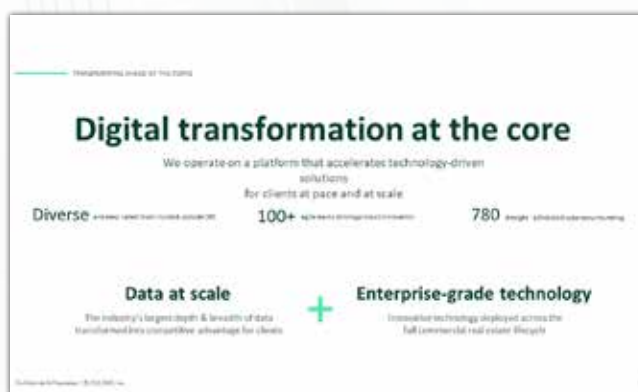
Impact Assessment:

The implementation of AI in the lease management process yielded notable results:

Achieved accuracy rates of 90% to 95% for each extracted element, leading to more than 25% reduction in manual efforts.

Leveraged LLM technology to surpass the accuracy of commercial off-the-shelf tools, enhancing the overall efficiency and reliability of lease management processes.

Enabling 5+ intelligent workflows through AI-driven features, CBRE enhanced operational efficiency and effectiveness in real estate management tasks.



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Sairam Vedam
Chief Marketing Officer

Solution Name: Zastra™

Company: Cigniti Technologies

Sector: Sector Agnostic

Company at a glance:

Cigniti Technologies is a global leader in Digital Assurance and Digital Engineering services, offering end-to-end solutions to enterprises across various sectors. The company specializes in leveraging AI-driven, proprietary Continuous Testing & Test Automation solutions that predict and prevent unanticipated failures.

Their Digital Engineering expertise spans Data & Insights, Business Intelligence/ Visualization, AI/ML, Product & Platform Engineering, Blockchain, & Intelligent Automation to power enterprise digital transformation journeys with a robust core. Cigniti's capabilities include consulting, strategizing, building, testing, deploying, and managing AI/ML projects.

Identifying the challenge:

Cigniti identified a challenge faced by a leading HVAC manufacturer, which struggled with accurately tracking coil failures, hampering quality control, visibility, and production. The inability to capture detailed information on failed end plates and fingerprinting information for analysis exacerbated the situation, leading to complex tracking of elusive end plates and a rise in coil failures.

Solution Breakdown:

Cigniti Technologies offers end-to-end Digital Assurance and Digital Engineering services to

global enterprises across various industries, including BFSI, HCLS, Retail, TTH, ISVs, and more. The company's strategic Digital Assurance, Quality Engineering, Advisory & Transformation, and Quality Assurance services help enterprises implement the best digital transformation practices and accelerate the launch of secure applications. With expertise in consulting, strategizing, building, testing, deploying, and managing AI/ML projects, Cigniti focuses on delivering comprehensive solutions for enterprise digital transformation.

Zastra™ AI/ML Platform Features:

- **Platform Agnostic:** Works on-premise and on any leading cloud service provider.
- **Recognition and Awards:** Recognized by Analysts, featured in industry Reports, and won awards like the 'Finalist' at the prestigious Watts Humphrey Awards 2023.
- **Capabilities:** Includes AI strategy, ML testing, business case development, AI CoE, model building, ML auditing, and more.

Zastra™ Platform Components:

1. Zastra™ Bot Platform:

- Powered by custom Large Language Models (LLMs) for Bots.
- Advanced conversational support with intelligence that understands context and multiple languages.

- Utilizes the RAG framework, trains Bots with structured/unstructured data, and implements guardrails for safety.

2. Zastra™ Agent:

- Provides Explainable AI for agent decisions.
- Offers real-time agent performance dashboards, robust security features, and a user-friendly interface.
- Enables Agent learning analytics.

3. Zastra™ Vision Platform:

- Offers Active-Learning based object classification/detection, localization & segmentation.
- ML-assisted enterprise workflows for effective collaboration among disparate teams.
- Integrates Pre-Built Algorithms for detection and classification, compatible with frameworks like PyTorch & TensorFlow.
- Supports Easy Data Migration, reduces annotation efforts with Active Learning, and allows Easy Export of labeled datasets and models.
- Features Topological Data Analysis to understand 'bias' in annotated data and Real-Time Collaboration.

By harnessing the capabilities of Zastra's™ AI/ML platform, Cigniti Technologies enables enterprises to enhance operational efficiencies, optimize engagement for customer experience, and drive meaningful digital transformations in various sectors.

Proposed Resolution and Benefits:

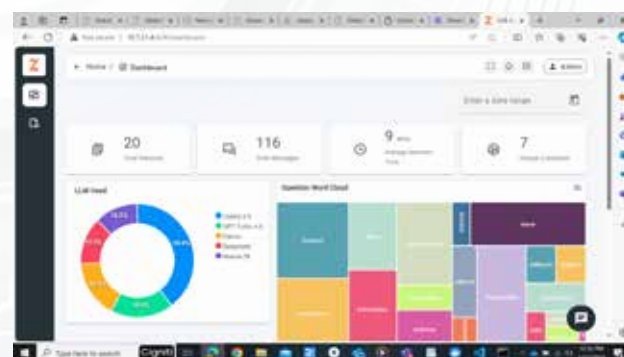
Cigniti's Zastra™ platform offers multiple accelerators and frameworks that reduce time to market and

enable the successful launch of AI/ML/Gen AI LLM-based applications. With scalable architecture and advanced algorithms, Zastra™ efficiently handles complex datasets, ensuring valuable insights can be extracted even from massive data repositories. Additionally, Cigniti Agent from Zastra™ helps enterprises orchestrate LLM apps and govern them from the admin interface, reducing clients' operational overheads.

Impact Assessment:

The implementation of Cigniti's Zastra™ platform at the HVAC manufacturer led to significant cost savings of \$8 million and achieved an impressive 98% accuracy in leak detection, showcasing the tangible benefits of leveraging AI and ML technologies.

The successful deployment of Cigniti's Zastra™ platform at the HVAC manufacturer underscores the transformative impact of AI and ML in addressing complex industrial challenges. By harnessing advanced computer vision technologies, the client overcame significant hurdles, improved quality control, and achieved substantial cost savings, demonstrating the potential of AI-driven solutions in driving operational efficiency and business outcomes.



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CLINION'S AI SOLUTIONS FOR FASTER, MORE ACCURATE CLINICAL TRIALS



Manuj V
Founder Director

Solution Name: Clinion AI

Company: QuadOne Technologies Pvt Ltd

Sector: Healthcare & Pharma/AI

Company at a Glance:

Clinion is a global clinical technology company that offers AI-enabled eClinical solutions. ClinionAI consists of EDC, RTSM, CTMS, eCOA, and document automation that cover the entire clinical trial lifecycle. Clinion is committed to innovating the future of clinical trials through ClinionAI and empowering its partners to manage trials more efficiently at lesser costs.

Identifying the Challenge:

Clinion addresses several significant challenges in clinical trials and research management. Traditional clinical trial processes are often inefficient, leading to delays and operational bottlenecks. Researchers frequently struggle with fragmented data management and integration, which can hinder accurate and timely decision-making. The complexity of routine tasks and data visualization can impede effective analysis and slow down study progress. Ensuring regulatory compliance and thorough documentation is a persistent issue, often complicating reporting and oversight. These common hurdles impact the overall productivity and efficiency of clinical research efforts.

Solution Breakdown / Review:

Clinion is an AI-Enabled eClinical Platform that is built in India and being used globally. It is the

fastest growing eClinical Platform that consists of EDC, RTSM, CTMS, ePRO, eConsent, document automation and more for running clinical trials.

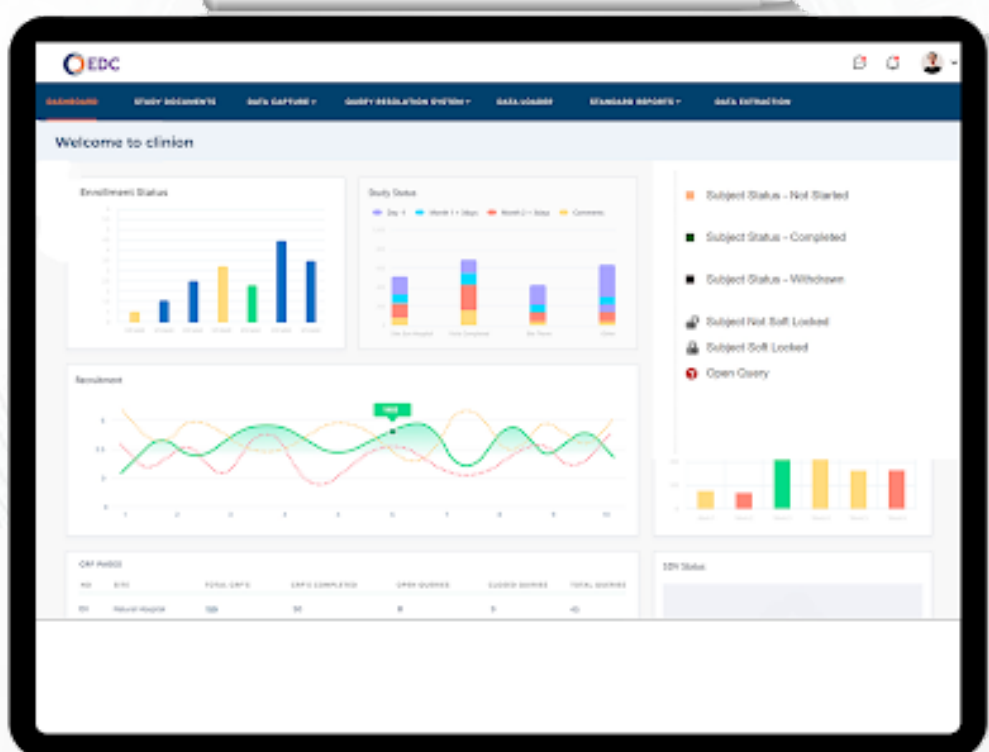
Proposed Resolution and Benefits:

Clinion integrates advanced AI/ML solutions into the clinical trial process to enhance efficiency and accuracy. The platform automatically generates study protocols from a synopsis using standardized templates, allowing for collaborative editing. It annotates eCRF forms with CDASH annotations and creates CDASH and SDTM reports with a single click, removing the need for external experts. Clinion also simplifies remote source data validation by extracting and cross-referencing data with EDC systems, automatically generating queries for discrepancies. Data Managers can use Smart GenAI Query to create complex data sets and raise queries in simple English, improving data quality. An intelligent chatbot offers a knowledge repository to streamline operations, while AI-driven tools accelerate medical coding for Adverse Events and Conmeds. GenAI Charts on the Fly enables easy creation and customization of data sets and charts, with options to save and share. Finally, Clinion automates 60-70% of Clinical Study Reports by populating templates from various inputs, reducing draft timelines and supporting collaboration.

Impact Assessment:

Clinion integrates AI/ML into clinical trials to deliver impactful solutions efficiently. Key achievements include:

- **eProtocol Generation:** Reduces protocol development time by 50% with collaborative refinement using standardized templates.
- **AI-enabled CDASH Coding:** Cuts annotation time by 70% and reduces reliance on external experts, lowering costs.
- **Effortless Remote Source Data Validation:** Decreases on-site monitoring by 60%, ensuring faster and more accurate data validation.
- **Smart GenAI Query:** Improves data review efficiency by 40% and accelerates trial timelines
- **Intelligent Chatbot Support:** Reduces support tickets by 30% by providing instant access to study information and streamlining operations.
- **AI Medical Coding for MedDRA & WHODD:** Accelerates coding processes by 70%, ensuring rapid and accurate adverse event and medication coding.
- **GenAI Charts:** Enhances data visualization and decision-making by creating and integrating custom data sets and charts.
- **CSR Documentation:** Automates 60-70% of Clinical Study Reports, cutting first draft timelines by 40% and improving collaboration.



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RESHAPING ACADEMIA

The Impressive Impact of CodeTantra's AI-Driven Educational Platforms

CODETANTRA



Ramana TSV
CEO

Solution Name: CodeTantra

Company: CodeTantra Tech Solutions Pvt.Ltd.

Sector: Education

Company at a Glance:

CodeTantra, has revolutionized education by providing innovative technology solutions to leading universities and colleges in India. These solutions, including the Interactive Coding Teaching Platform and AI-based Assessment Platform, have significantly improved learning outcomes and assessment integrity for millions of students across the country.

Identifying the Challenge:

The implementation of advanced teaching techniques and secure assessments presented a significant challenge for universities and colleges. Ensuring assessment integrity, enhancing learning outcomes, and achieving inclusivity and non-discrimination in the education sector were pivotal challenges that required innovative solutions.

Solution Breakdown:

CodeTantra's technology solutions encompass an Interactive Coding Teaching Platform, an AI-based Secure Online Proctored Assessment Platform, and an AI-based Auto-Evaluation platform for paper-based written exams. These solutions are deployed in prominent universities and colleges, such as IITs, NITs, IIITs, and more, to facilitate disruptive changes

in teaching methodologies and assessment processes.

Proposed Resolution and Benefits:

CodeTantra leveraged AI at the core of its products to address the challenges faced by educational institutions. The incorporation of AI bolstered the security, integrity, and inclusivity aspects of assessments, thereby ensuring a fair and unbiased evaluation process. Moreover, AI has directly contributed to improving students' learning outcomes through the Interactive Teaching Learning Platform.

The solutions provided by CodeTantra have not only enabled secure online proctored assessments but also facilitated the auto-evaluation of paper-based written exams, providing immense convenience to educational institutions. The usage of cutting-edge AI technology has resulted in the highest standards of security, privacy, and inclusivity, benefiting both the institutions and the students.

Impact Assessment:

The impact of CodeTantra's AI-powered solutions has been substantial, with over 30 million AI-based proctored assessments conducted, setting a record



CODETANTRA

AI-Based Interactive Teaching & Learning Platform for Coding Courses

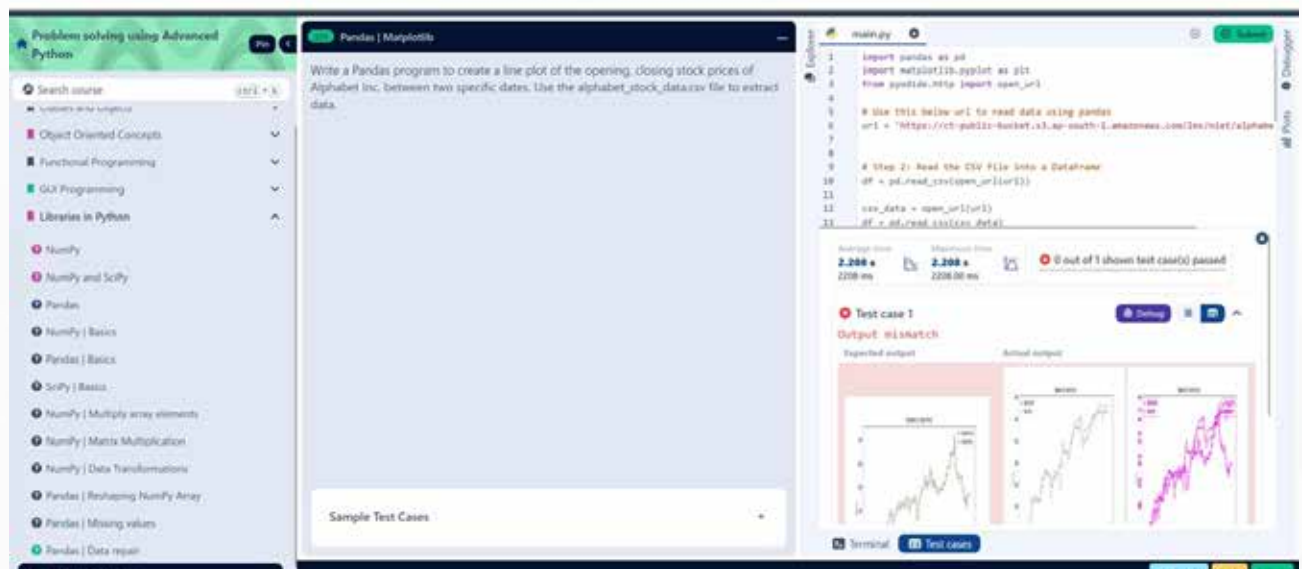
World's first platform with auto-evaluation of even Data Science Lab problems involving Matplotlib graphs

An Advanced Teaching and Learning
Platform for Computer Science
Faculty & Students

in India. Additionally, the Interactive Teaching Learning Platform has successfully trained over 1 million learners on coding skills, demonstrating tangible and far-reaching improvements in learning outcomes for students across the country.

By harnessing the power of AI, CodeTantra has significantly elevated the educational landscape, contributing to the advancement of teaching methodologies, assessment integrity, and student success in prominent academic institutions.

Advanced Interactive Teaching & Learning Platform for Data Science



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DELIVERING THE FUTURE

How DispatchTrack's AI-Based Platform is Redefining Last-Mile Logistics

DispatchTrack



Satish Natarajan
Founder, CEO

Company: DispatchTrack

Sector: Transport & Logistics

Company at a Glance:

DispatchTrack is a SaaS platform that offers last-mile delivery management solutions to businesses around the world. With over 2,000 customers, the platform enables businesses to optimize delivery routes, communicate with customers, manage drivers, capture proof of delivery, and track last-mile deliveries in real-time. The solution has been built on a powerful AI-based route optimization engine, enabling DispatchTrack to rapidly consider a large number of factors to find the most efficient and effective route for different delivery parameters.

Identifying the Challenge:

The traditional route optimization process is often manual or legacy-based, incapable of accounting for the many factors that have an impact on last-mile delivery routes such as customer priority, time window requests, differences in driver skills, variations in drive time depending on traffic, etc. This often results in missed delivery windows, increased costs, and reduced customer satisfaction.

Solution Breakdown:

With a vision to redefine the customer delivery experience, DispatchTrack was established in 2010 by Satish Natarajan and Shailu Satish. The idea was to offer businesses a solution that would help them

improve customer satisfaction, reduce delivery costs, and manage operations more intelligently. Over the years, DispatchTrack's scalable SaaS platform has made delivery organizations more connected, agile, and intelligent, enabling customers to create a brand their customers can trust.

DispatchTrack's last-mile delivery platform is one of its flagship solutions, helping top global brands deliver over 180 million packages every year. Developed by the DispatchTrack engineering team in Hyderabad, the solution is constantly innovating to improve performance, serve customers better, and provide more flexible and efficient operations.

Proposed Resolution and Benefits:

To tackle this challenge, DispatchTrack developed an AI-based route optimization engine, enabling them to consider a multitude of factors to find the most efficient routes for various delivery parameters. The solution leverages AI-based algorithms to estimate delivery time windows with 98% accuracy, enabling customers to deliver on time, every time, while ensuring optimal route efficiency. The AI-enabled technology can also calculate routes in minutes, whereas older solutions could take hours, allowing businesses to generate optimized routes quickly in response to changing business conditions.

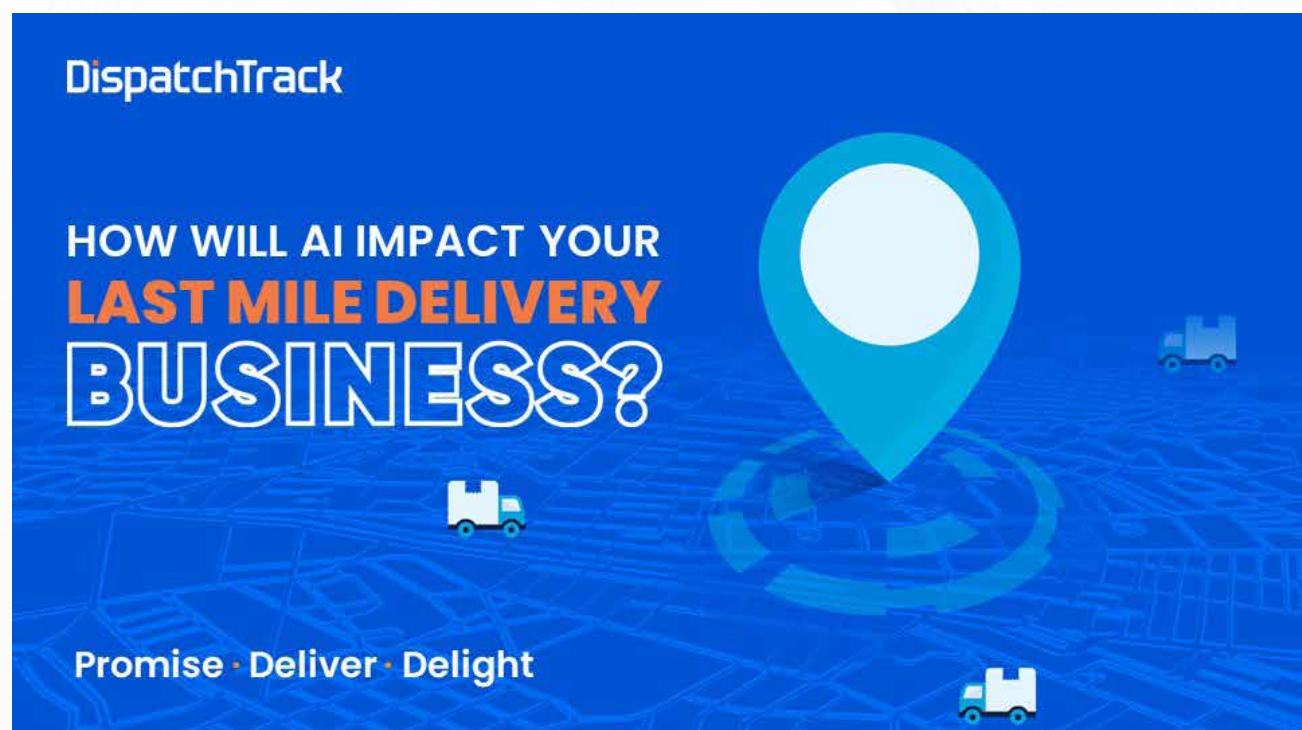
DispatchTrack's route optimization engine also provides the ability to leverage a hybrid of static and dynamic route optimization, providing operational flexibility and efficiency to users. This comprehensive and automated approach enables DispatchTrack to cover a wide range of routing use cases, providing more flexible and efficient solutions to clients.

Impact Assessment:

DispatchTrack's last-mile delivery platform has revolutionized the industry, providing businesses with a solution that is reliable, safe, secure, transparent, accountable, compliant, and focused on protecting and reinforcing human values. The AI-based technology has allowed DispatchTrack to provide consistent and reliable outputs,

ensuring security across the entire platform. The company also strives to be transparent about how the system was developed, providing clear roles and processes to ensure reliable service for customers.

DispatchTrack's AI-driven system is compliant with all applicable laws, statutory standards, rules, and regulations, and is driven by the goal of empowering users to keep their delivery promises to customers. DispatchTrack's innovative AI-driven solutions have enabled businesses to optimize their delivery routes, improve customer satisfaction, reduce costs, and manage their operations more intelligently, all while empowering them to create a brand that customers can trust.



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HEXAGON ALI

The Answer to Standardization and Compliance for Commodity Matching in Large EPC Projects



Navaneet Mishra
Senior Vice President & Head

Solution Name: Hexagon ALI

Company: Hexagon Capability Center India Private Limited

Sector: IT and BPM

Company at a Glance:

Hexagon, a global leader in digital reality solutions, has its largest R&D center in India. The center focuses on innovation in software, AI/ML, GNSS, manufacturing, and laser scanner applications. Hexagon is committed to societal impact through initiatives like the HexArt AI community center and supporting education in Warangal villages.

Identifying the Challenge:

The challenge Hexagon ALI addresses is the lack of consistency and efficiency in the commodity matching process across multiple EPC companies on the same project. Inconsistent definitions and terminologies lead to duplications, errors, and delays during project execution and handover. Manual mapping methods are time-consuming and error-prone, especially in large projects.

Solution Breakdown:

Hexagon's R&D Centre in India, as the largest R&D center for Hexagon globally, focuses on delivering high-impact solutions across multiple business domains. It has developed several innovative solutions, including OnCall for police command and control, SDx for asset information management, Aura for 3D patient imaging, LEICA

BLK2GO handheld laser scanner companion app, and HxDR cloud-native digital reality platform. These solutions showcase Hexagon's expertise in leveraging technology to address diverse industry needs.

In addition, Hexagon ALI is an AI-based automated commodity-matching solution that addresses the challenge of aligning commodity descriptions from multiple Engineering, Procurement, and Construction (EPC) companies on the same project. By utilizing classical machine learning techniques, Hexagon ALI accurately matches commodity descriptions, enhances consistency across documents, and supports standardization and compliance.

Proposed Resolution and Benefits

Hexagon ALI's machine learning model uses supervised learning to match commodity descriptions accurately, enhancing consistency across documents and supporting standardization. This automated solution has reduced the time taken for manual matching processes by 30%. Features like textual similarity, semantic context, and historical data are leveraged to ensure the correct identification and categorization of commodities.

The benefits of Hexagon ALI include:



Consistency: The solution ensures that commodities are correctly identified and categorized across documents, promoting standardization and compliance.



Efficiency: Hexagon ALI significantly reduces the time taken for commodity matching, resulting in increased productivity and faster project execution.



Accuracy: The machine learning model used in Hexagon ALI identifies patterns and similarities between different descriptions, ensuring accurate matching even when phrased differently.



Scalability: Unlike manual mapping methods, Hexagon ALI can handle large projects with numerous commodity descriptions, making it scalable for various project sizes.

Impact Assessment:

The implementation of Hexagon ALI has resulted in a 30% reduction in the time currently taken by traditional manual matching processes. This significant time saving improves overall project efficiency and productivity. Furthermore, the solution enhances consistency and compliance by accurately identifying and categorizing commodities across documents.

In terms of security and privacy, Hexagon ALI has undergone multiple cycles of penetration testing to check for security vulnerabilities. No user data is collected, and project data collected is limited to the

project and not shared outside. The solution provides explainability to users by providing details on how the AI solution arrived at its recommendations/ results. Additionally, Hexagon ALI follows a human-in-the-loop approach, where a human validates the AI recommendations before they are passed downstream. This ensures accountability and compliance with project-specific data privacy protocols.



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DRIVING SUSTAINABILITY AND SAFETY

How Honeywell's AI Solutions are Transforming Industries

Honeywell



Anita Vijaykrishnan
VP R&D and India Leader

Solution Name: Honeywell AI

Company: Honeywell

Sector: Building Automation and Sustainability

Company at a Glance:

Honeywell is a Fortune 100 technology company that delivers industry-specific solutions that include aerospace products and services, control technologies for buildings and industry, and performance materials globally. Their technologies help everything from aircraft, buildings, manufacturing plants, supply chains, and workers become more connected to make our world smarter, safer, and more sustainable.

Identifying the Challenge:

Honeywell's AI solutions address several key challenges. By leveraging AI and machine learning, they enhance energy efficiency and reduce carbon footprints in commercial buildings through their Forge sustainability platform. Their AI-driven automation solutions streamline and improve accuracy throughout the product life cycle, from installation to maintenance, minimising manual



errors. Additionally, Honeywell's AI-powered surveillance systems enhance public safety by analysing video footage to monitor and secure urban areas.

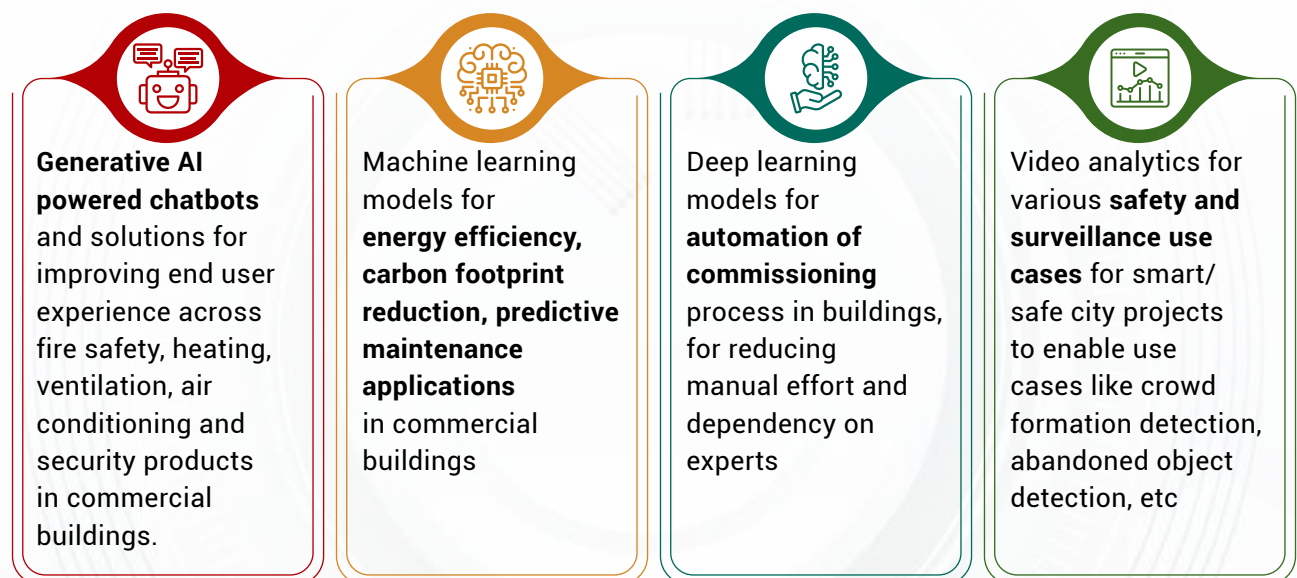
Solution Breakdown/Review:

Honeywell has built AI solutions to drive sustainability. The highlights of their project include:

- Forge **sustainability** for buildings by leveraging AI/ML
- AI solutions to drive automation
- AI solutions to drive safety and security

Proposed Resolution and Benefits:

Honeywell AI aims to solve problems through their following solutions:



Impact Assessment:

Forge sustainability+ platform for buildings has been deployed at 10+ commercial buildings across the globe and has been driving energy savings of up to 10%, depending on the size, location, and age of the building.

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ENHANCING INCIDENT MANAGEMENT WITH INVESCO'S AI SOLUTIONS



Solution Name: Invesco
Company: Invesco India Pvt Ltd
Sector: BFSI

Company at a Glance:

Invesco's latest initiative focuses on integrating advanced AI and data analytics to optimise investment strategies and enhance client experience. The project leverages machine learning to analyse market trends, predict risks, and personalise portfolio management, ensuring more informed and efficient investment decisions. By embedding cutting-edge technology into their operations, Invesco aims to deliver superior investment outcomes while maintaining a strong commitment to innovation and client-centric solutions.

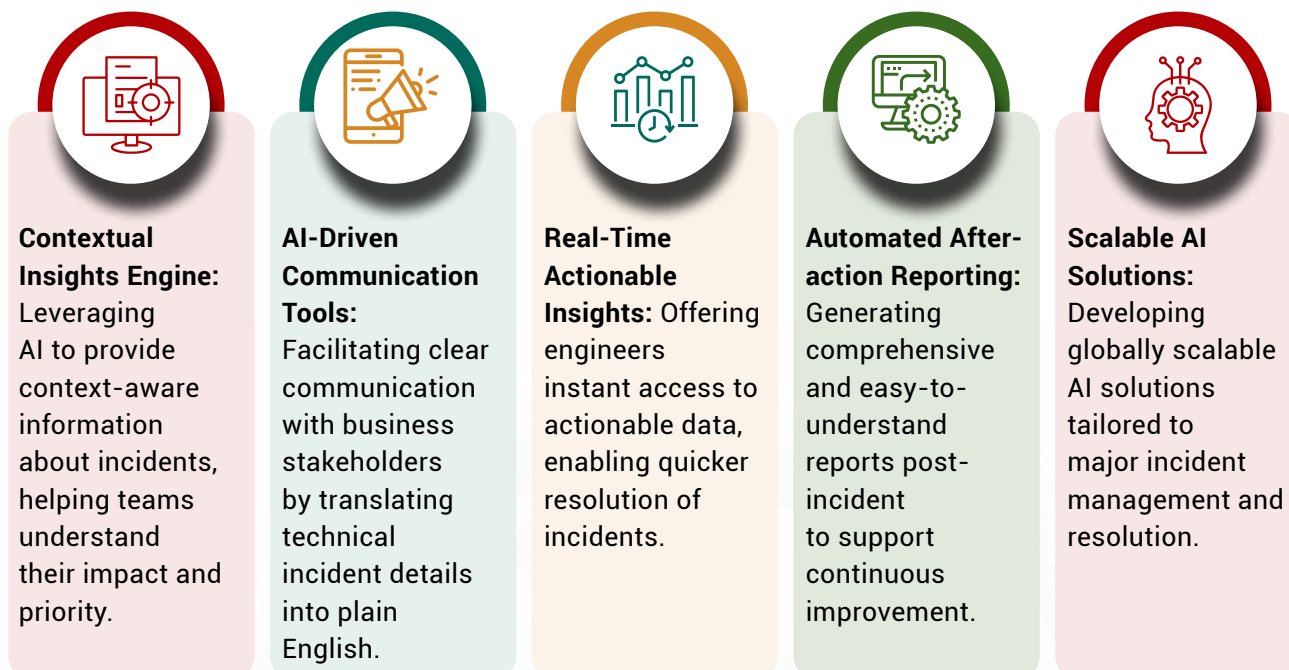
Identifying the Challenge:

The project addresses several key problems in incident management. Teams often struggle to understand the impact and priority of incidents due to a lack of context-aware information, leading to inefficient responses. Communication gaps arise when technical incident details are not easily understood by business stakeholders, causing delays and misalignment. Engineers face challenges in resolving incidents swiftly due to the unavailability of real-time actionable data. Post-incident reporting is often time-consuming and lacks clarity, hindering continuous improvement. Additionally, the need for scalable solutions across global operations presents a significant challenge in managing and resolving major incidents effectively.



Solution Breakdown / Review:

Here's a review of Invesco's solutions developed in India:



Proposed Resolution and Benefits:

Invesco has integrated Custom GPT into their Internal Major Incident Portal, transforming how major incidents are managed. By ingesting Major Incident data, Custom GPT provides **real-time, context-aware insights** directly within the application. This AI-powered solution aids engineers in quickly understanding the criticality and impact of incidents, leading to faster and more informed decision-making. Additionally, Custom GPT **translates complex technical details into plain English**, enhancing communication with business stakeholders. The AI also automates the generation of **after-action reports**, making the post-incident review process more efficient and insightful. Our AI solutions, developed in India, demonstrate a significant leap in operational efficiency and stakeholder engagement.

Impact Assessment:

The integration of Custom GPT has led to remarkable improvements in incident resolution times, significantly boosting operational efficiency. Engineers now have instant access to critical information, reducing cognitive load and expediting decision-making processes. This has resulted in a measurable decrease in resolution times, enhancing overall productivity. Improved communication with stakeholders has fostered greater transparency and trust, while automated after-action reports have facilitated continuous improvement. The scalable nature of Invesco's AI solutions highlights their global applicability and impact, showcasing our commitment to innovation and excellence in incident management. This strategic focus on AI-driven insights underscores their ability to tackle complex operational challenges effectively.

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TRANSFORMING BUSINESS EFFICIENCY WITH LTIMINDTREE CANVAS.AI



Jitendra Putcha
EVP & Global Head

Solution Name: Canvas.ai

Company: LTIMindtree

Sector: IT and BPM

Company at a Glance:

LTIMindtree is a global technology consulting and digital solutions company that enables enterprises across industries to reimagine business models, accelerate innovation, and maximize growth by harnessing digital technologies. As a digital transformation partner to more than 700 clients, LTIMindtree brings extensive domain and technology expertise to help drive superior competitive differentiation, customer experiences, and business outcomes in a converging world. Powered by 81,000+ talented and entrepreneurial professionals across more than 30 countries, LTIMindtree – a Larsen & Toubro Group company – combines the industry-acclaimed strengths of erstwhile Larsen and Toubro Infotech and Mindtree in solving the most complex business challenges and delivering transformation at scale.

Identifying the Challenge:

LTIMindtree Canvas.ai addresses several critical problems faced by enterprises in their digital transformation journeys. Many organisations struggle with the inefficiency and high costs associated with manual and complex processes, which slow down operations and decision-making. The inability to effectively analyse and leverage large volumes of data hinders business innovation and agility, leading to missed opportunities and

suboptimal outcomes. Additionally, traditional systems often fail to provide real-time insights, limiting an organisation's ability to respond swiftly to market changes and customer needs. Furthermore, the lack of industry-specific solutions makes it challenging for companies to fully optimise their operations and remain competitive in a rapidly evolving digital landscape.

Solution Breakdown / Review:

LTIMindtree Canvas.ai is an AI-driven platform designed to accelerate digital transformation by automating complex processes and enhancing decision-making capabilities across enterprises. Canvas.ai integrates advanced AI and machine learning algorithms to analyse vast datasets, providing actionable insights that drive business efficiency and innovation. The platform offers customizable solutions tailored to specific industry needs, enabling organisations to optimise operations, reduce costs, and improve customer experiences. With features like intelligent automation, predictive analytics, and real-time data processing, LTIMindtree Canvas.ai empowers businesses to stay competitive in a rapidly evolving digital landscape, fostering agility and informed decision-making at every level.

Proposed Resolution and Benefits:

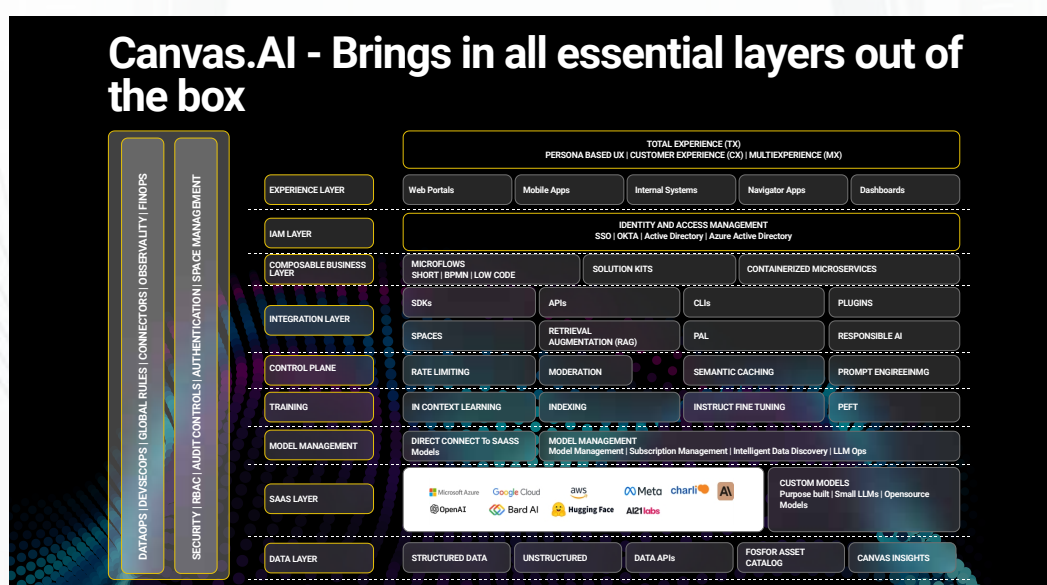
Canvas.ai is an enterprise-ready generative AI platform

that accelerates the journey from concept to value for businesses, adhering to mindful AI principles. It stands as one of the first platforms of its kind, enabling enterprises to rapidly scale generative AI capabilities, enhancing business innovation and engineering productivity. With a well-architected framework and robust governance, Canvas.ai manages proprietary and industry-specific data, prioritising ethical use, sustainability, privacy, and security. Its platform-based architecture caters to creators, admins, and users, facilitating the development, management, and consumption of governed AI solutions. Through partnerships with leading Large Language Model (LLM) providers and a suite of proprietary accelerators and domain-specific offerings, Canvas.ai empowers clients to harness the potential of Generative AI. This supports data monetisation, productivity enhancement, and responsible deployment, all while reducing infrastructure and operating costs, ensuring compliance with data regulations, and promoting transparency across the business supply chain.

Impact Assessment:

LTIMindtree Canvas.ai streamlines digital transformation with dynamic model selection for optimal AI model usage.

- **Semantic caching** reduces token costs by up to 50%, improving data processing efficiency.
- Users can build and deploy Generative AI apps in 5 minutes with **7 pre-built kits**.
- The platform offers over **30 customizable Navigator Apps** for various industry-specific use cases.
- **App modernization and cloud migration times** are **reduced** by up to 50%, boosting productivity and cutting costs by up to 60%.
- **Personalization** features provide a competitive advantage, while data-driven decision intelligence supports informed choices.
- The platform includes sound governance measures, tailored LLMs, and rapid idea transformation into **practical use cases** within 8 weeks.



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STREAMLINING OBSERVABILITY WITH NEW RELIC AI



Rohit Ramanand
India Head & Group VP

Solution Name: New Relic AI

Company: New Relic

Sector: Data Analytics

Company at a Glance:

New Relic enables Full-Stack Observability that helps engineers plan, build, deploy, and run great software. Only New Relic has a unified data platform for all telemetry data—metrics, events, logs, and traces — paired with analysis tools to find solutions fast. They integrate across different tech stacks and enable AI to get actionable insights.

Identifying the Challenge:

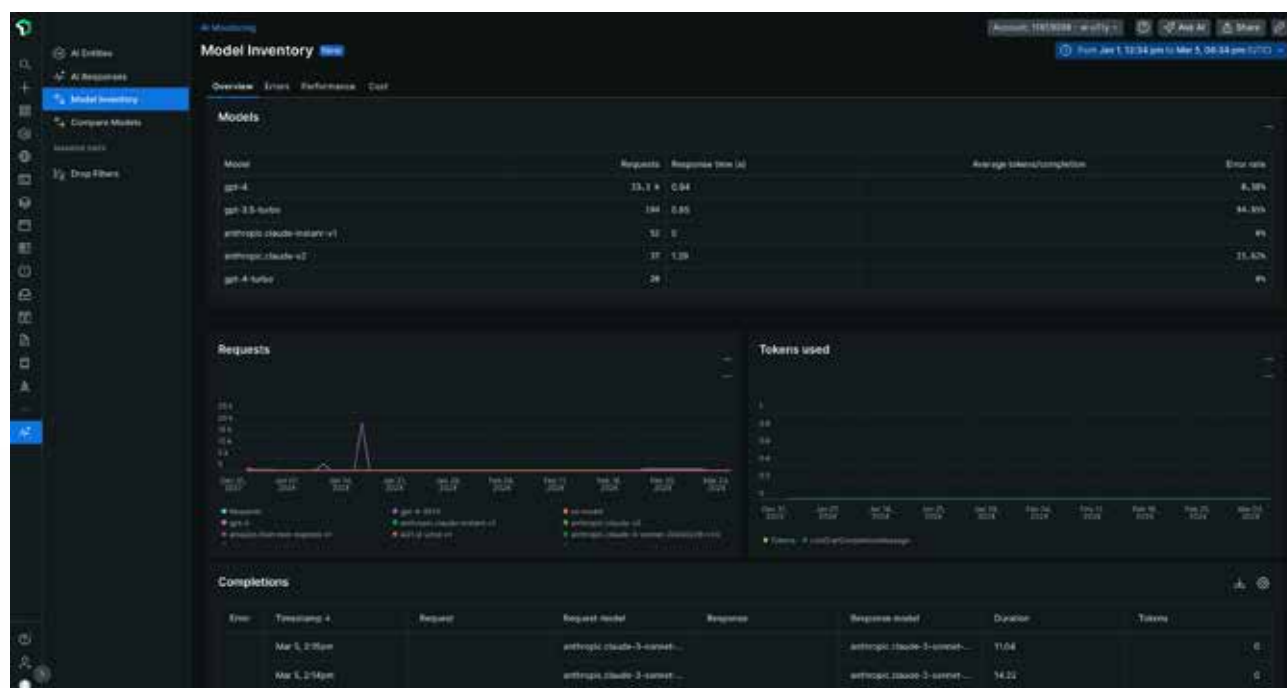
Organisations face significant challenges in ensuring the reliability and performance of their digital services. Monitoring synthetic transactions and application performance becomes increasingly complex as systems grow in scale and intricacy. Managing cloud infrastructure adds another layer of difficulty, with the need to oversee resources across diverse environments while maintaining operational efficiency. Additionally, as businesses expand, maintaining consistent performance and avoiding downtime becomes critical, requiring tools that can handle rapid growth without compromising on service quality. These challenges demand a comprehensive strategy to proactively address potential issues before they impact user experience and overall business performance.

Solution Breakdown / Review:

The solution highlights the integration of New Relic's Synthetics for Monitoring, Application Performance Monitoring (APM), and Cloud Infrastructure tools, which have collectively driven significant growth. By leveraging these solutions, the product has enhanced the ability to proactively monitor digital experiences, optimise application performance, and manage cloud resources efficiently. This comprehensive approach has resulted in improved system reliability and scalability, enabling them to support rapid business expansion and meet evolving customer demands.

Proposed Resolution and Benefits:

New Relic equips engineers with powerful tools to achieve observability across their entire infrastructure and technology stack, even at massive scale. Through a unified dashboard, engineers can view, instrument, and customise the metrics most relevant to their needs. New Relic has also developed New Relic AI, a generative AI solution aimed at democratising observability by addressing the growing demand for advanced AI monitoring solutions. Notably, New Relic AI monitoring stands as the industry's first application performance monitoring (APM) solution specifically designed for AI, offering



unprecedented visibility into the entire AI application stack. With features like response tracing, New Relic AI monitoring eliminates the guesswork in debugging complex AI applications by revealing the complete journey of an AI request, from initial user input to the final response.

Impact Assessment:

Impact of New Relic AI can be understood as follows:

- Traditional observability requires users to have deep knowledge of their systems. New Relic AI, however, analyses telemetry data and the software stack to highlight what needs attention.
- It can identify, explain, and apply fixes to code-level errors directly within the user's IDE.
- Embedded into the New Relic observability platform, New Relic AI provides a seamless, integrated experience.
- Combining large language models (LLMs) with the New Relic unified telemetry data platform, users can gain deep insights into their system's state simply by asking straightforward questions.
- Through a familiar chat interface, users can inquire about system issues, and New Relic AI will respond with in-depth analysis, insights on anomalies, and suggested fixes.
- For instance, questions like "Why is my shopping cart service slow?" or "How did the latest server update impact my app?" prompt New Relic AI to analyse telemetry and context across the software stack to suggest causes and resolution steps.

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REVOLUTIONIZING APPLICATION DEVELOPMENT AND CUSTOMER ENGAGEMENT WITH PEGA GENAI



Deepak Visweswaraiah
Vice President

Solution Name: Pega GenAI

Company: Pegasystems Worldwide India Inc

Sector: AI

Company at a Glance:

Pega is a low-code platform that uses AI to automate workflows and aid in decision-making. It helps businesses work more efficiently, unify experiences, and adapt quickly with the help of AI-powered decisioning.

Identifying the Challenge:

Traditional application development processes are often slow and complex, leading to delays and reduced productivity. Companies also face difficulties in effectively engaging with customers due to inadequate tools for understanding and interacting with users. Back-end integration can be technically challenging, adding to the development burden. Additionally, maintaining robust governance and compliance in enterprise solutions remains a significant concern, impacting the ability to innovate confidently.

Solution Breakdown / Review:

Pegasystems offer a range of advanced AI-powered solutions to enhance customer engagement and streamline service operations. The AI-powered customer decisioning hub predicts customer needs, helping businesses to increase engagement and tailor interactions. Pega Voice AI is a sophisticated

tool that supports customer service representatives (CSRs) during live phone interactions, improving efficiency and response quality. Additionally, Pega GenAI leverages generative AI to assist both developers and end users in creating and managing applications. All these capabilities are built on a cloud-native, low-code SaaS platform, providing a scalable and flexible solution for modern enterprise needs.

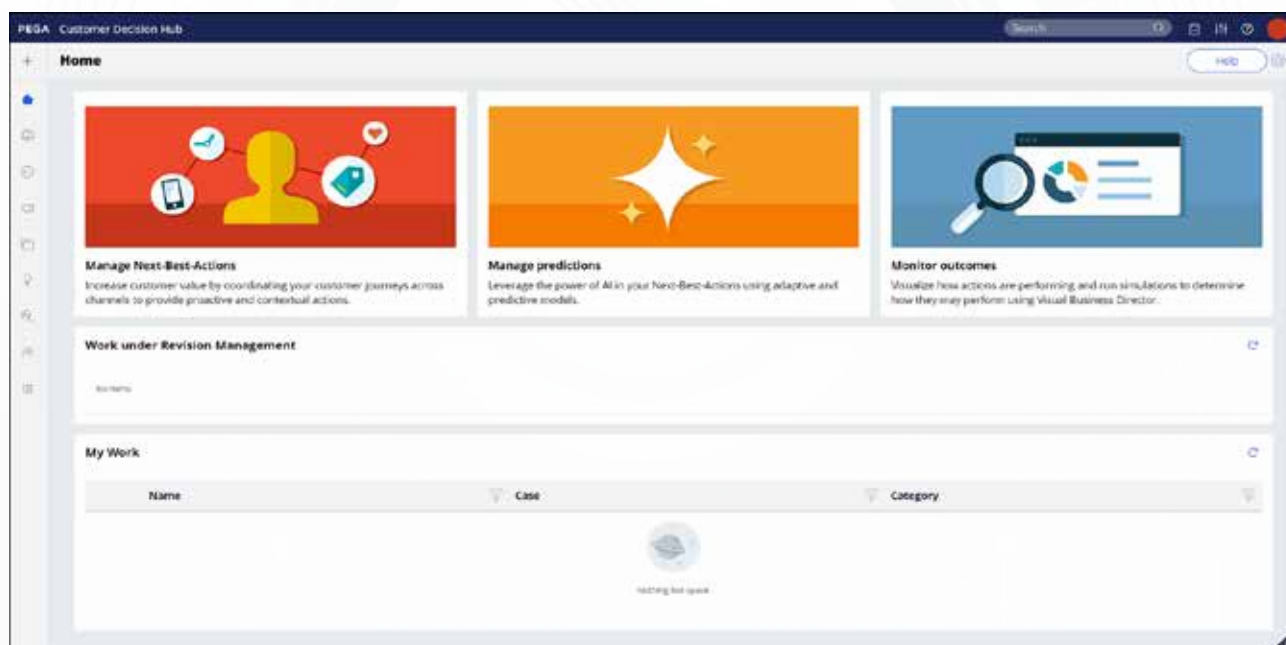
Proposed Resolution and Benefits:

Pega GenAI is a set of generative AI-powered features integrated across Pega Infinity, designed to boost productivity and efficacy. It enables rapid application development, enhanced customer engagement, and improved customer service by applying AI and automation. Pega GenAI includes features such as AI-prompted workflows, AI-generated personas, automatic data modelling, back-end integration assistance, and sample data generation. It also includes Pega GenAI Blueprint, a collaborative workspace that combines generative AI with Pega best practices to accelerate the application design process. This tool allows for the transformation of revolutionary concepts into enterprise applications using AI-generated low-code solutions. With built-in, enterprise-ready governance, Pega GenAI allows teams to innovate with confidence.

Impact Assessment:

The AI COE adopts AI/ML research and development to drive significant impact.

- The **Pega Customer Decision Hub** enhances operational efficiency by integrating data, analytics, and communication channels, enabling businesses to predict customer needs, personalise interactions, and streamline engagement processes. For instance, a Fortune 50 bank uses this AI engine to compute a targeted conversation within 350 ms.
- **Pega's AI engine** has transformed customer experience by centralising decision-making and leveraging predictive and adaptive machine learning models. This approach allows for the creation of dynamic bundles tailored to customers, resulting in a 20% increase in incremental value for some clients.
- Pega AI has also led to significant **cost savings**. A Fortune 500 insurance company, for example, achieved a 33% reduction in handling time for claim form requests and saved \$4M with virtual agents handling over 75% of inbound chats.
- **Pega GenAI Blueprint** leverages generative AI to streamline and accelerate the application design process. This tool integrates generative AI with Pega's best practices, enabling teams to rapidly transform a vision into a tangible application design. The Blueprint's SaaS model ensures continual updates and improvements, making it an ever-evolving platform for digital transformation.



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OVERCOMING TESTING CHALLENGES WITH QUALISENSE

Enhancing Software Quality in Complex Environments

QUALITEST™



Subbiah Muthiah
CTO Emerging Technologies

Solution Name: Qualisense

Company: Qualitest

Sector: IT and BPM/AI

Company at a Glance:

Qualitest is the world's leading AI powered quality engineering company, with 8,200 quality engineers worldwide. They deliver projects both directly at client locations and remotely from Qualitest-owned locations across the globe.

For over 26 years, they have been helping clients deliver high quality products, enabling businesses to reduce the risk, time, and costs of implementing vital IT solutions by engineering quality from inception, conducting quality assurance and software testing across SDLC. Through their capability driven acquisitions, they are pioneering in building modern digital engineering services focusing on transformative capabilities, moving away from generic capabilities typically supported by large system integrators.

Identifying the Challenge:

Qualisense addresses significant challenges in the realm of software testing and quality assurance.

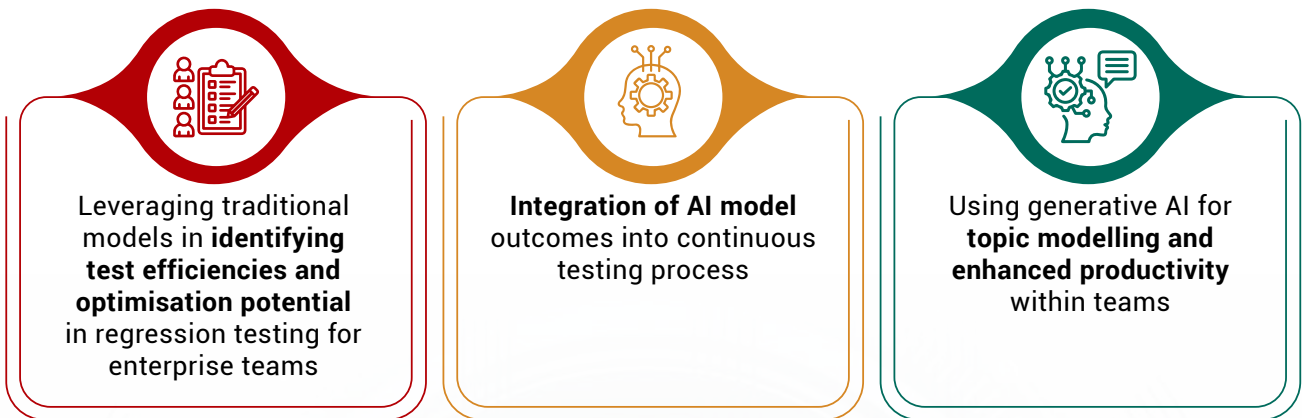
Organizations often struggle with the inefficiencies and delays caused by traditional testing methods, which lack scalability and adaptability. Ensuring comprehensive test coverage across multiple environments and platforms remains a persistent issue, leading to potential undetected defects and subpar product quality. The growing complexity of software systems, especially with the integration of automation and AI, adds further complications. Moreover, maintaining continuous testing within fast-paced development cycles proves difficult, making it hard to keep up with changing software requirements and ensuring a consistent user experience.

Solution Breakdown / Review:

Qualisense, an AI-powered tool, improves risk-based testing strategies and considerably speeds up release velocity, reducing costs and allowing organisations to do more for less, while retaining high quality. Qualisense solution's core development and implementation is done in India.

Proposed Resolution and Benefits:

Qualitest is leveraging both traditional and generative AI to classify and predict outcomes of use cases that would assist quality engineering teams as follows:



Impact Assessment:

Qualisense is in active development for the past 5 years, with over 50+ deployments for large enterprise customers and has helped in achieving over six times faster "time to release" for these clients.

Company Overview

WE ARE The world's leading AI powered Quality engineering company, with 8,200 quality engineers worldwide. We deliver projects both directly at Client locations and remotely from Qualitest-owned locations across the globe.

For over 26 years, we've been helping clients deliver high quality products, enabling businesses to reduce the risk, time, and costs of implementing vital IT solutions by engineering Quality from inception, conducting Quality Assurance and Software Testing across SDLC. Through our capability driven acquisitions, we are pioneering in building modern **Digital engineering** services focusing on transformative capabilities, moving away from generic capabilities typically supported by large system integrators.

- World's largest AI Powered QE company
- Next-Gen Industry-aligned Digital Assurance solutions
- 70 Nationalities, 12 Countries, 5 Continents
- ~40% Women
- Business & Brand Assurance
- Global Service Delivery (22 DC's)

Customer base	563 active customers	Global Workforce	8,200+
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QUALITEST™ 2 Q

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ENHANCING POWER DISTRIBUTION WITH AI-DRIVEN ASSET MANAGEMENT



Chandra Rao Jampa
Vice President - Global Delivery

Company: Techwave Consulting Pvt Ltd
Sector: IT and BPM/AI

Company at a Glance:

Techwave is a leading global IT and engineering services and solutions company revolutionising digital transformations. They enable their clients to maximise their potential and achieve a greater market with a wide array of technology services, including, but not limited to, Enterprise Resource Planning, Application Development, Analytics, Digital, and the Internet of things (IoT).

Identifying the Challenge:

The solution addresses several critical problems in power distribution management. It tackles the challenge of handling sensitive personal information in images, ensuring privacy compliance. The accurate identification of different pole types and components is improved, overcoming issues with asset tracking. The condition assessment problem of detecting physical damage such as tilt, rust, and cracks is resolved. Additionally, it addresses inefficiencies in maintenance practices and resource allocation, which often lead to increased costs and regulatory compliance challenges.

Solution Breakdown / Review:

Techwave's solution on asset recognition and condition assessment in power distribution

focuses on leveraging advanced technologies to enhance asset management. By utilising AI and IoT, the solution aims to accurately identify assets and evaluate their condition in real-time, leading to improved maintenance strategies and operational efficiency. This approach helps prevent failures,



optimise resource allocation, and ensure reliable power distribution across networks.

Proposed Resolution and Benefits:

Techwave's solution utilises advanced AI capabilities to transform the management and maintenance of electric poles and related assets in the power industry.

- **Privacy Protection:** Deep learning models blur personally identifiable information (PII) in images, such as faces and licence plates, to ensure compliance with privacy regulations.
- **Asset Recognition:** Object detection and classification models, including convolutional neural networks (CNNs), accurately identify different types of poles and their components from images.
- **Condition Assessment:** AI detects issues such as tilt, rust, cracks, and rot in poles using specialised models, including anomaly detectors and classifiers.
- **Maintenance Optimization:** AI-driven analysis supports informed maintenance decisions, optimises resource allocation, reduces costs, and ensures regulatory compliance with an iterative, agile approach.

Impact Assessment:

The AI solution developed by Techwave significantly impacts the client's operations through:

1. **Enhanced Asset Visibility:** Providing a clear and detailed view of the condition of all poles, enabling better planning and execution of maintenance tasks.
2. **Maintenance Efficiency:** Streamlining maintenance processes through automated recognition and condition assessment,



reducing the need for manual inspections and minimizing downtime.

3. **Service Reliability:** Improving the reliability of power supply by proactively identifying and addressing potential issues, thereby reducing the frequency and duration of power outages.
4. **Cost Savings:** Lowering operational costs by optimizing maintenance schedules and preventing revenue losses due to non-compliance and power disruptions.
5. **Scalability:** The solution is designed to scale with client's needs, allowing for the incorporation of additional asset types and conditions as the project progresses.



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OPTIMISING CONTENT AND CUSTOMER INSIGHTS AT THOMSON REUTERS



Sudha Sharma

AVP, Head of Global Corporate and Employee Technology Services,
Head of TR Hyderabad

Company: Thomson Reuters

Sector: IT and BPM/AI

Company at a Glance:

Thomson Reuters has been leveraging AI and machine learning in its professional information products for decades, leveraging its unique, authoritative proprietary content and technology. This has positioned them to react fast to emerging applications of generative AI and deliver solutions which augment our customers' work, so they can focus on what matters most. Thomson Reuters works within a rigorous set of data and AI ethics principles to promote and ensure trustworthiness in its design, development, and deployment of AI and use of data, delivering standards for accuracy and security that their customers expect.

Identifying the Challenge:

Thomson Reuters is developing & offering three projects for below mentioned challenges:

- Content Operations Hyderabad, with 500+ specialists, manages global content design and publishing, exploring AI for editing, summarization, and insights from large document volumes.
- The Commercial Excellence team faces challenges in extracting contract terms related to product usage and overage charges from 800+ contracts in various CRM systems, often scanned and in different languages.
- Identifying customer segments from e-store orders is difficult when guests don't provide

company names, impacting accurate revenue allocation and sales incentives.

Solution Breakdown / Review:

Managing and processing vast amounts of content across multiple time zones while ensuring quality and efficiency is a significant challenge, which can be addressed by leveraging advanced AI models for tasks like content editing and summarization. Extracting specific contract terms related to product usage and overage charges from a large number of contracts stored across various CRM systems, especially when documents are scanned images in different languages, presents a major difficulty. Accurately identifying customer segments and sub-segments from e-store orders when guests do not provide company names is a challenge, impacting revenue segmentation and sales incentive allocation. Thomas Reuters aims to solve these challenges with the help of AI & ML models.

Proposed Resolution and Benefits:

Thomson Reuters addresses the above stated three challenges with three solutions as follows:

Solution 1:

- Content editing: A Microsoft Word plug-in communicates with Open Arena via API, using FLAN T5 and rule-based methods to detect

formatting discrepancies based on a quality checklist.

- Content summarization: Automatically generates summaries and titles for third-party legal articles for Westlaw MENA.
- Drafting content: AI (Claude 3) auto-generates queries based on historical data, refining and improving with continued use.
- Generating data insights: Microsoft Excel Copilot automates data insights using prompts to fetch relevant information.

Solution 2:

- AWS S3 Bucket stores raw documents.
- Textract extracts text from documents.
- OpenAI Embedding Model generates document embeddings for vector space representation.
- FAISS performs similarity searches to find relevant document contexts.
- LangChain Orchestrator manages AI workflow.
- GPT-4-Turbo generates responses based on prompts and context.
- Post-processing refines AI outputs.
- RAG (Retrieval-Augmented Generation) integrates product usage data with contract data.
- Lambda services automate data ingestion, and a visual dashboard is created for end consumption.

Solution 3:

AI technology used in validating and identifying the segmentation solution, involves the following components:

- -SFDC customer Search using UiPath Robotic process
- -Edge Copilot: This LLM model generates responses based on the prompt and context provided.
- -Classification: This step involves classifying the correct segment based on the AI response
- -Post-processing: This step involves refining the output from the AI models.

Impact Assessment:

- Significant efficiency gains are expected from the project, potentially saving the equivalent of 20+ full-time employees, while improving content accuracy and delivery speed.
- The ContractIQ project addresses challenges with complex, multi-page documents and inconsistent language in scanned images, reducing extraction time from 15-20 minutes to under 1 minute. This scalable solution could generate millions in revenue through overage cost collection and upselling.
- Customer Segmentation optimises compensation, territory planning, and sales assignments, reducing assignment time from 12-15 minutes to under 2 minutes. It also enhances Finance team accuracy in revenue booking and P&L reporting.

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INTEGRATING RESPONSIBLE AI INTO DEMENTIA CARE WITH URVOGELBIO



Manda Venkata Sasidhar
Founder Director

Company: Urvogelbio Private Limited
Sector: Biotechnology

Company at a Glance:

Urvogelbio Private Limited, headquartered in Hyderabad, India, was established in 2017. The company specializes in exosome-based diagnostics and therapeutics for neurodegenerative diseases. The firm's proprietary exosome technology platform allows for non-invasive diagnostic solutions for Alzheimer's, Parkinson's, and multiple sclerosis by quantifying brain-released factors from blood samples.

Urvogelbio offers a variety of services including genetic testing, biomarker discovery, clinical trial management, companion diagnostic development, and integrating digital twin technology into dementia care. The company has also been actively involved in the development of cell-free therapies, preclinical and clinical research services, and advanced drug delivery systems leveraging the unique properties of exosomes.

Identifying the Challenge:

The main challenge faced by Urvogelbio is the need for advanced technologies and non-invasive diagnostic solutions to aid in the early and accurate detection of neurodegenerative diseases. The complexity of neurodegenerative diseases requires personalized and precise interventions, which can be difficult to achieve without innovative and cutting-edge technologies.

Solution Breakdown/Review:

Urvogelbio's approach aligns with the emerging paradigm of precision medicine in neurodegenerative disease management, offering a more personalized and nuanced approach to diagnosis, prognosis, and treatment planning.

The company's platform leverages the ability of exosomes to cross the blood-brain barrier, enabling non-invasive quantification of brain-derived factors from peripheral blood samples. This technology, known as neuronal exosome profiling, allows for the detection of key pathological markers such as amyloid-beta, tau proteins, and alpha-synuclein, which play crucial roles in the pathogenesis of Alzheimer's disease, Parkinson's disease, and other neurodegenerative conditions.

Additionally, Urvogelbio utilizes next-generation sequencing (NGS) and whole-exome sequencing (WES) to identify mutations and variants in dementia-associated genes, including PSEN1, PSEN2, APP, MAPT, GRN, and others. This comprehensive genetic analysis enhances the accuracy of diagnosis and risk assessment for neurodegenerative diseases.

To further enhance their diagnostic capabilities, Urvogelbio has integrated these technologies with digital twinning. This sophisticated computational

model simulates an individual's cognitive function, biomarker levels, and genetic risk factors using machine learning algorithms, including recurrent neural networks and transformer architectures. By analyzing temporal patterns in patient data, this digital twin can predict disease progression and enable earlier interventions and personalized treatment strategies.

- **Neuronal Exosome Profiling:** Urvogelbio's technology enables the noninvasive diagnosis of neurodegenerative diseases by quantifying brain-released factors from blood samples. This aids in early and accurate detection of conditions such as Alzheimer's, Parkinson's, and multiple sclerosis. The company has developed Lab Developed Tests (LDTs) and is currently in the process of developing microfluidic tests based on LDTs.
- **Digital Twinning of Neurodegenerative Diseases:** Urvogelbio is integrating digital twin technology into dementia care. Digital twins, which are digital replicas of physical entities, can simulate real-time activities and interactions of dementia patients. This provides a sophisticated decision support system for clinicians and caregivers based on biomarker, psychological, clinical, and imaging data.
- **Cell-Free Therapeutics from Exosome Technology:** Urvogelbio is developing cell-free therapies based on exosomes, which due to their natural biocompatibility and ability to cross the blood-brain barrier, offer a promising approach for treating neurodegenerative diseases.
- **Preclinical and Clinical CRO for Neurodegenerative Solutions:** The establishment of a contract research organization (CRO) specializing in preclinical and clinical trials for neurodegenerative disease solutions. This service accelerates the development of new diagnostics and therapeutics by providing robust stratification and monitoring during trials.
- **Exosome-Based Drug Delivery Systems:** Leveraging the unique properties of exosomes, Urvogelbio is developing advanced drug delivery systems that enhance the targeting efficiency and stability of therapeutic molecules, potentially offering applications in oncology, gene therapy, and other fields.

Proposed Resolution and Benefits:

To address these challenges, Urvogelbio proposed a multifaceted approach:

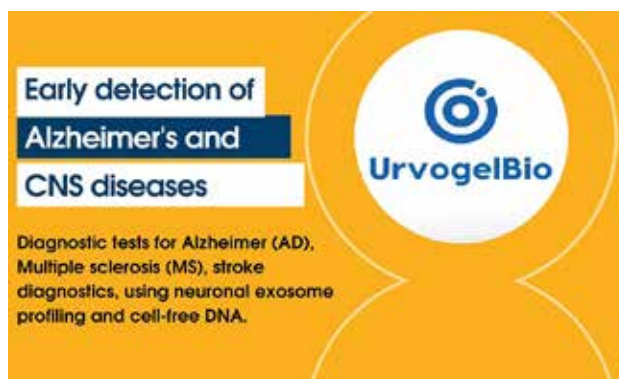
- **Integrating Digital Twin Technology:** The company aims to develop an AI-powered digital twin solution for dementia patients that integrates multidimensional data to analyze temporal patterns, predict disease progression, and optimize treatment recommendations. The goal is to enhance early detection, diagnosis, and management of neurodegenerative diseases, leading to more precise, personalized, and timely interventions.
- **Developing Advanced Therapies and Diagnostic Tools:** Urvogelbio is developing cell-free therapies and advanced drug delivery systems leveraging exosome technology, which are non-invasive and have the potential to provide targeted and effective treatments for neurodegenerative diseases. Additionally, the development of advanced diagnostic tools such as microfluidic tests aims to aid in the early and accurate detection of these conditions.

In ensuring ethical, fair, and reliable practices, Urvogelbio has incorporated several responsible AI principles into their digital twin solution for dementia care:

- **Compliance:** The company ensures that its digital twin solution complies with relevant healthcare regulations and data protection laws such as HIPAA and GDPR. They have implemented robust data security measures, conducting regular audits and maintaining up-to-date compliance with evolving AI regulations. Protocols for data handling, storage, and sharing are established to ensure legal and ethical adherence throughout the AI system's lifecycle.
- **Explainability:** The digital twin system includes features that provide clear and intuitive explanations of its decisions and predictions. Explanations are offered in non-technical language, making them accessible to healthcare providers, patients, and caregivers. The use of explainable AI techniques demystifies how the

AI model arrives at its conclusions, facilitating informed decision-making and building trust in the system.

- **Accountability:** Urvogelbio has established organizational structures and policies to clearly define accountability for the outcomes of their AI systems. Human supervisory control is integrated to oversee AI decisions, ensuring that there is always human validation and intervention when necessary. The company has defined roles and responsibilities for monitoring, evaluating, and addressing any issues arising from the AI system's outputs.
- **Privacy and Security:** The digital twin solution employs robust data protection measures to safeguard sensitive patient information. This includes data anonymization, encryption, and secure storage practices to ensure confidentiality and integrity. Urvogelbio regularly conducts security audits and updates to identify and mitigate vulnerabilities, protecting the system against adversarial attacks and malicious use. Patients' rights to know what data is collected, why it is collected, and who has access to it are strictly upheld.
- **Inclusivity & Non-Discrimination:** Urvogelbio's digital twin technology is designed to be fair and inclusive, avoiding biases based on sensitive attributes such as race, gender, or ethnicity. By integrating diverse data



sources, including neuronal exosome profiling, genetic information, cognitive assessments, and lifestyle factors, the system ensures a comprehensive and unbiased representation of each patient's cognitive health. Machine learning models are trained on diverse datasets to avoid prejudices, promoting equitable treatment for all patients.

Impact Assessment:

Urvogelbio's innovative platform and multidimensional approach have the potential to revolutionize dementia care, significantly contributing to neurological diagnostics and therapeutics. By enhancing early detection and enabling more precise, personalized, and timely interventions, the company's solutions may lead to improved patient outcomes and more efficient allocation of healthcare resources.

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OPTIMIZING DAIRY LOGISTICS WITH RESPONSIBLE AI



Solution Name: AI enabled Route Planning Engine

Company: Vasista Enterprise Solutions Private Limited

Sector: IT and BPM/AI



Krishna Varma
Director



Hari Varma
Director

Company at a Glance:

Vasista Enterprise Solutions Private Limited, a leading ERP software development company with a decade of experience in the dairy industry, is leveraging AI to enhance its suite of products. This initiative addresses critical challenges in the dairy industry, such as complex logistics, distribution, and sustainability. The AI-driven Optimized Route Planning Engine is a key component of this project, empowering dairy supply chain companies with extensive procurement and distribution networks.

Identifying the Challenge:

The dairy industry faces challenges related to complex logistics, distribution, and environmental sustainability. Manual route planning processes can lead to inefficiencies and increased operational costs, while traditional distribution methods may contribute to a higher carbon footprint. Addressing these challenges requires innovative solutions that can optimize routes, reduce fuel consumption, and improve operational efficiency.

Solution Breakdown / Review:

Vasista's product suite includes Milkosoft, a cloud-based Dairy ERP, Daily Orders, a B2B2C platform, and Daily P&I, a platform for farmer connectivity. These solutions cover transactions from milk sourcing

to finance, facilitate real-time supplier-customer connections, and foster interaction within the rural dairy ecosystem.

Vasista's AI-driven Optimized Route Planning Engine also leverages machine learning for demand prediction, delivery tracking, intelligent load planning, route optimization, automated decision-making, and adaptive learning to enhance operational efficiency and environmental sustainability in dairy logistics.

Proposed Resolution and Benefits:

Vasista's proposed resolution involves the integration of AI-driven features into its suite of products to optimize dairy logistics operations. By leveraging machine learning for demand prediction, delivery tracking, intelligent load planning, route optimization algorithms, automated decision-making, and adaptive learning, the company aims to enhance operational efficiency and reduce the carbon footprint of dairy logistics.

The benefits of this resolution include reduced daily logistics costs, improved route planning for complex distribution networks, reduced travel distance and time, lower fuel consumption, and decreased emissions. Additionally, the automation of decision-making processes allows employees to focus on higher-value tasks, further boosting operational efficiency.

Impact Assessment:

The implementation of AI-driven features in Vasista's suite of products has had a significant impact on the dairy industry, improving operational efficiency and contributing to environmental sustainability. Through optimized route planning, the company has successfully reduced daily logistics costs, empowered employees with automated route planning, and minimized the carbon footprint of dairy logistics operations. The AI-driven features have enhanced the company's ability to address critical challenges in the dairy industry, positioning Vasista as a leading innovator in the field of dairy ERP solutions.

The solution has significantly reduced operational costs by optimizing routes and maximizing vehicle utilization. Prior to implementation, the cost per liter was ₹1.86. Post-implementation, the cost has decreased to ₹1.65 per liter, resulting in a savings of ₹0.21 per liter. For a scale of 1 LLPD (one lakh liters per day), this translates to a total savings of ₹21,000 per day, representing an 11.29% cost savings.

The introduction of this AI-driven solution has substantially reduced the need for manual route adjustments. Previously, the client spent an average of 6 hours daily on this task. With this system in place, this has been reduced to just 2 hours per day, achieving a 66% savings in manual effort.

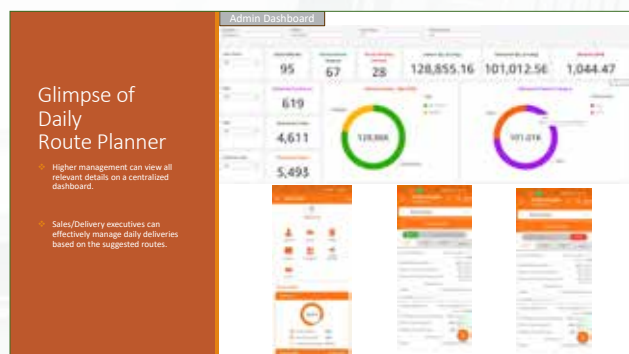
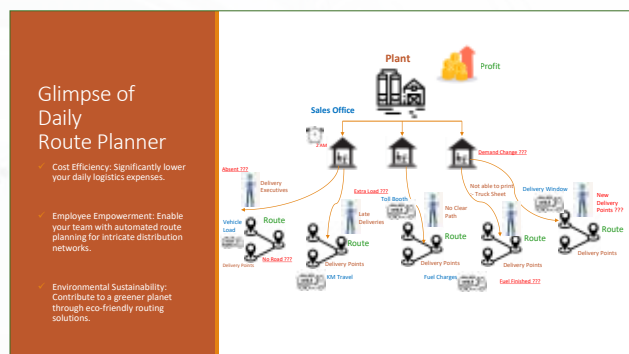
In addition, the solution offers the following sustainability benefits:

- **Carbon Footprint Reduction:** By optimizing routes and minimizing travel distances, the solution has decreased fuel consumption and

emissions. The carbon footprint has been reduced from 1,030 kg per day to 52 kg per day, representing a 95% daily savings.

- **Sustainability:** Improved operational efficiency and reduced environmental impact contribute to sustainability goals, promoting eco-friendly practices within the dairy logistics process. The total impact on stationary and printing for 1 LLPD has decreased from 90 trees to 0, resulting in 100% savings.

Given that Vasista processes approximately 11 million liters per day, the cumulative impact of the solution amounts to a total saving of 2.3 million per day.



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