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GCC AI COMPENDIUM

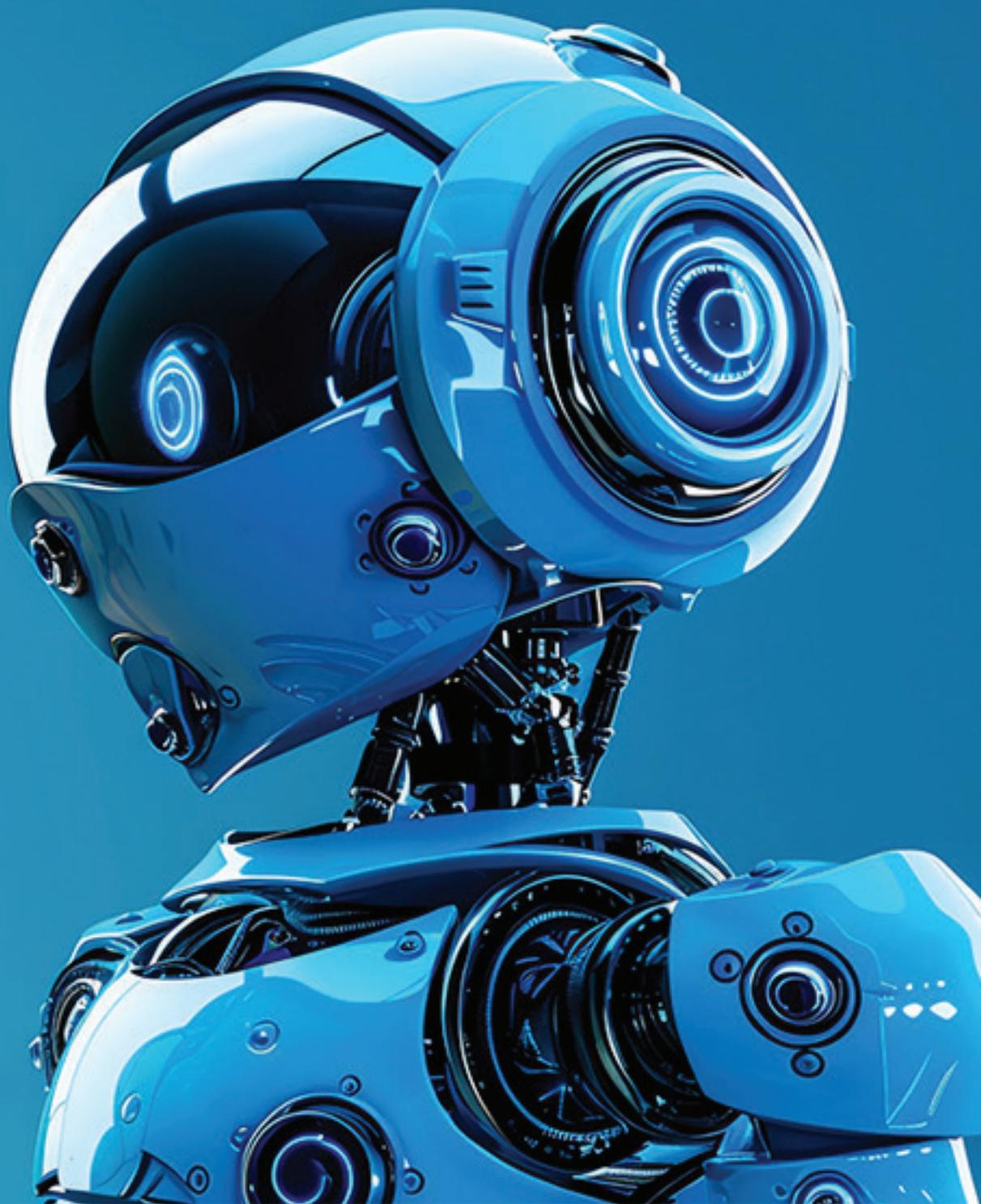


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Foreword



Sindhu Gangadharan

MD SAP Labs India, Head, Customer Innovation Services, SAP

As artificial intelligence (AI) advances at an unprecedented pace, its influence on nearly every aspect of human life grows both profound and expansive. Reflecting on the journey of AI, we see a remarkable evolution: from rudimentary rule-based systems to today's intelligent models, capable of sophisticated learning, reasoning, and generating human-like responses. What was once an academic pursuit, limited to the realms of theory, has transformed into a foundational technology, powering everything from the smartphones in our pockets to life-saving innovations in medicine and beyond.

In this era of rapid technological transformation, the role of Global Capability Centers (GCCs) in driving AI innovation has become pivotal. Over the past five years, India's GCC ecosystem has surged, positioning itself as a global powerhouse of talent, technology, and transformative impact. With more than 1,700 GCCs generating \$64.6 billion in export revenue and employing nearly 2 million skilled professionals, India has earned

its title as the “GCC Capital of the World.” This impressive growth is particularly evident in the AI domain, where GCCs are pushing the boundaries of next-generation solutions. Today, over 120,000 AI professionals and 185+ dedicated AI/ML Centers of Excellence (COEs) across India are leading advancements in critical areas like predictive analytics, customer experience, and risk management. Notably, more than 30% of AI COEs are housed within Software & Internet GCCs, underscoring a strong, sustained commitment to building world-class AI capabilities. This transition of India's GCCs toward high-value, innovation-driven work is fuelling global transformation.

AI holds the power to unlock opportunities that once seemed out of reach, transforming industries, societies, and economies. This Compendium serves as both a testament and a resource, illuminating the essential role that AI and India's GCCs play in shaping a digital future that is smarter, more efficient, and increasingly human-centered.

Executive Summary

It today's rapidly evolving digital landscape, AI has emerged as a critical driver of transformation across industries, particularly within GCCs in India. The AI Compendium serves as a comprehensive resource capturing innovations, challenges, impact and success stories within the AI ecosystem, highlighting the pivotal role of GCCs in leveraging AI to reshape business models and enhance productivity.

GCCs are increasingly utilizing AI to tackle complex business challenges, streamline processes, and deliver scalable solutions that create global impact. By harnessing AI's potential, these centers accelerate digital transformation for their parent organizations, improving efficiency and enhancing customer engagement.

The current compendium outlines significant AI adoption trends across BFSI, Retail and Technology Product & Services. It features detailed case studies illustrating how organizations successfully deploy AI to enhance customer experiences and drive innovation. Emerging technologies such as generative AI, LLM, and AI-powered automation business processes. are explored in depth, emphasizing their transformative potential in redefining traditional.

A major focus for GCCs is the development of responsible and transparent AI solutions. Ethical considerations, such as explainability and accountability, are prioritized to ensure compliance with global standards and build stakeholder trust. This responsible approach ensures that AI adoption remains aligned with organizational values and societal expectations.

Furthermore, the compendium addresses the key challenges faced in AI adoption, including data privacy concerns and ethical dilemmas. It discusses strategies for overcoming these obstacles, ensuring that AI continues to be a key enabler of growth and innovation for GCCs and their global parent organizations.

Ultimately, the AI initiatives undertaken by GCCs are delivering tangible business impact, playing a pivotal role in driving growth, innovation, and shaping the future of the global digital economy.

We sincerely thank the leaders from SAP, HSBC, AstraZeneca, Morgan Stanley, Fiserv, Sun Life, NatWest, and PepsiCo for their valuable time and insightful guidance in shaping the framework of this compendium.



Technology Products & Services



Sindhu Srinivas

Head of Sustainability Engineering,
SAP Labs India

SAP Labs India – OVERVIEW

As a global leader in enterprise applications and business AI, SAP stands at the intersection of business and technology. For over 50 years, organisations have trusted SAP to help them reach their full potential by uniting business-critical operations across finance, procurement, HR, supply chain, and customer experience.

SAP Labs India (SLI) is one of SAP SE's strategic Research & Development (R&D) hubs. Founded in November 1998, SAP Labs India drives SAP's product strategy and is responsible for building and operating core SAP solutions, as well as providing product localisation and solutions specific to India. Uniquely, SAP Labs India encompasses the entire breadth of the SAP product portfolio and contributes to flagship products such as the Business Technology Platform, SAP S/4 HANA, Financial Management, Supply Chain Management, CRM and Customer Experience, Spend Management, RISE with SAP, Sustainability, and Business Networks.



PROBLEM DESCRIPTION

Organisations today face the challenge of generating sustainability reports efficiently and accurately, providing updates to internal and external stakeholders on company compliance and progress towards sustainability goals, while ensuring adherence to regulations and reporting standards. AI-assisted ESG report generation in the product Sustainability Control Tower (SCT) leverages best-practice reporting templates, generative AI text, and ESG-calculated metrics to automatically create comprehensive sustainability reports.

This solution enables Sustainability Leads to save significant time on writing and updating ESG reports, increases the accuracy of reported ESG data, and allows sustainability functions to focus more on execution and sustainability management.

This leads to efficiency gains by reducing the time needed to collect relevant ESG metrics. Also, it helps in creating charts/graphs which makes the report writing comprehensible. This in turn leads to enhanced accuracy of reported ESG data and quality of documentation.



SOLUTION HIGHLIGHTS

ESG Report Generation with AI: Automate AI-enabled ESG reports, reduce efforts on periodic reports, and embed sustainability strategy into programme execution.

Customise ESG report templates:

Utilise SAP-provided report templates that follow common ESG reporting standards or tailor templates to specific needs.

Leverage ESG data:

Generate automated draft reports for periodic internal or external reporting based on ESG data available in the SAP Sustainability Control Tower.

Reduce manual efforts:

Significantly decrease the time and effort required to produce sustainability reports.

The screenshot shows the SAP Generate ESG Reports with AI application. On the left, there's a list of reports with columns for Report Name, Reporting Period, and Template Name. On the right, a modal window titled 'Information' provides details about AI-based report generation, including a note about AI's role in generating reports and a 'Do not show this message again' checkbox. Below the modal is a table of completed reports with columns for Created On, Status, and various actions like Delete and Download.

Report Name	Reporting Period	Template Name
testsmoke2	2019	Generic ESG
testsmoke	2021	Generic ESG
test report Sep	September, Q3, 2024	Generic ESG
MyCorp Report 2023	2023	Generic ESG
TestGAIESRS	2024	ESRS E1: Climate Change
TestReportGA1	2023	Generic ESG
TestReport	August, Q3, 2023	Generic ESG
Test report	2023	Generic ESG
Test report 1	2023	Generic ESG
New test report	2022	Generic ESG
ESG Report 2023	2023	Generic ESG

Created On	Status
Oct 17, 2024, 11:12:09AM	Completed
Oct 10, 2024, 7:53:21PM	Completed
Sep 20, 2024, 8:04:53PM	Completed
Aug 28, 2024, 12:53:35PM	Completed
Aug 27, 2024, 4:18:07PM	Completed
Aug 27, 2024, 4:03:24PM	Completed
Jul 17, 2024, 9:20:08AM	Completed
Jun 26, 2024, 12:19:17PM	Completed
Jun 19, 2024, 6:33:20PM	Completed
May 15, 2024, 7:52:53PM	Completed
May 7, 2024, 6:58:44PM	Completed



SOLUTION DESCRIPTION

The Generate ESG Reports with AI app enables automatic creation of AI-based sustainability reports, helping organisations streamline and enhance the accuracy of their sustainability reporting. Built into the Generate ESG Reports with AI app, this tool automates the reporting process across selected timeframes using ESG (environmental, social, governance) data provided in the SAP Sustainability Control Tower. These AI-generated reports follow a predefined structure based on the chosen SAP report template and are available for download in .pdf format.

The screenshot shows the SAP Generate ESG Reports with AI application. It displays a list of templates with columns for Template Name, Description, and Type. A specific template, 'Generic ESG Report Template', is selected.

Template Name	Description	Type
Generic ESG Report Template	An ESG Report covering the organization's Economic, Environmental, Social & Governance performance.	SAP Provided
ESRS E1 Template	ESRS E1 Report covering the Climate Change related aspects.	SAP Provided

Image: Showing the selection of template for report generation

The screenshot shows the SAP Generate ESG Reports with AI application. It displays a form for generating a report. The 'Template Name' is set to 'Generic ESG Report Template', 'Report Name' is 'My Test Report', 'Period' is '2023', and 'Format' is '.pdf'. The 'Generate Report from Template' button is visible at the bottom.

Image: showing the generation of a report against a template and a period



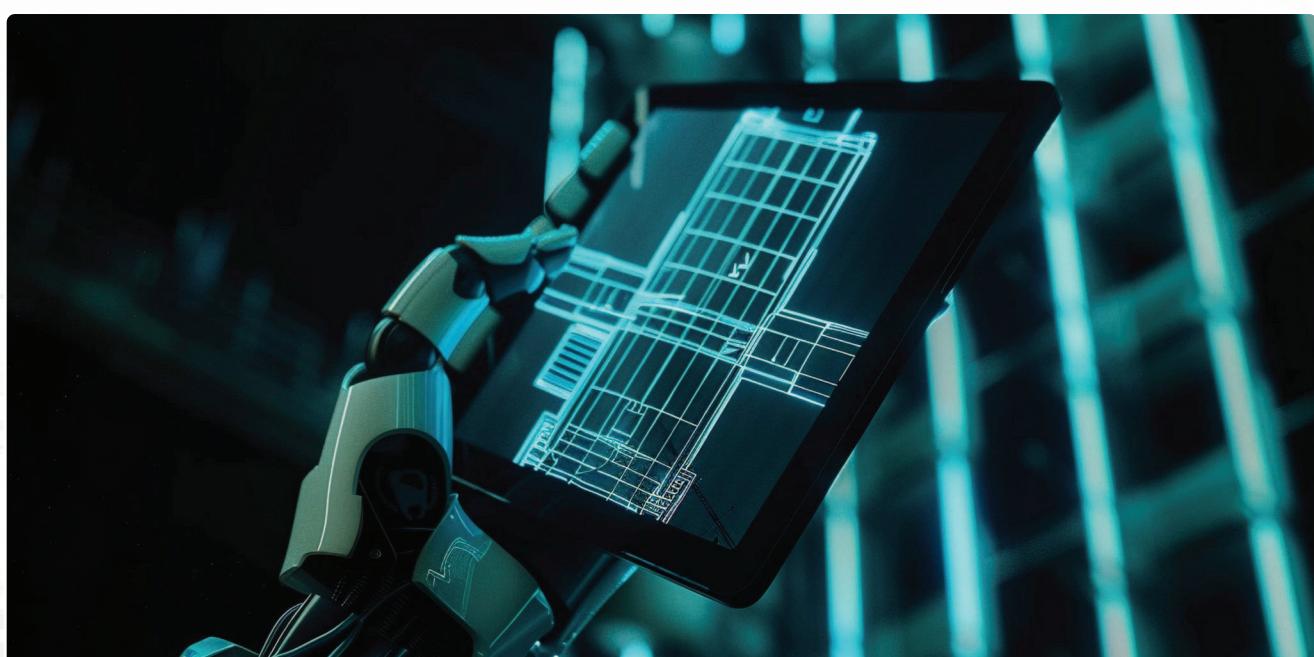
DEVELOPMENT OF THE AI SOLUTION

Our AI solution transforms ESG reporting by automating the generation of accurate, comprehensive reports tailored to specific timeframes using actual customer data. Here's how our cutting-edge technology was developed and the key development aspects it includes:

- **Efficient Data Utilisation:** Leveraging large language models (LLMs) and advanced SQL grounding techniques, our AI converts customer data from SCT systems into coherent, factual content that complies with sustainability standards.
- **Visualisation:** Complex charts and tables are seamlessly generated using ChartJS and a JSON schema for parameter configurations, creating rich visual content that enhances the report's readability and aesthetic appeal.
- **Automated Verification:** SQL-based grounding ensures textual content derives from vetted queries, preventing inaccuracies. Our sophisticated Retrieval-Augmented Generation (RAG) process safeguards against informational discrepancies.

- **Reliable Chart and Table Generation:** The AI avoids direct SQL query generation, reducing risks associated with SQL commands. Configurations for charts and tables are managed programmatically, ensuring reliable content presentation.
- **Seamless PDF Conversion:** The report generation process outputs HTML content, converted into downloadable PDF or Word documents, ensuring accessibility and easy editing by Sustainability Experts prior to final publication.
- **Streamlined Interface:** A user-friendly interface simplifies report generation, allowing users to input a period and title, with the report content generated automatically to streamline the process.

Our AI-driven platform not only enhances the report generation process but also empowers organisations to maintain high standards of accuracy, facilitating meaningful and impactful sustainability reporting.





CHALLENGES

Validating Report Quality

Quality: Ensuring the quality and accuracy of AI-generated reports remains a significant challenge. Despite advanced validation tools, maintaining high standards and avoiding inconsistencies is an ongoing effort that requires continuous improvement.

Transparency of Facts

Facts: Achieving transparency in reports is complex. Mechanisms that trace each fact back to specific SQL queries are essential. This challenge requires ongoing efforts to improve the verifiability and auditability of the facts presented, ensuring users can trust the data's origins.

Instilling Trust in AI Outputs

Building trust in AI-generated content is crucial. While grounding techniques help, ensuring consistent reliability requires ongoing refinement to enhance user confidence in AI outputs.

Decision-Making Trade-offs

Balancing AI autonomy with user control is challenging. Determining the optimal level of decision-making for the AI involves continuous testing and adjustment. It's crucial to ensure that the AI assists appropriately without overstepping, preserving both efficiency and user confidence.



LEARNINGS

Advanced Validation Techniques

Robust validation processes are essential to ensure content accuracy and relevance. Continuous improvement in validation methods is critical for maintaining high standards. This remains a focal point for continuous improvement to uphold high standards consistently.

Reliable Content Generation

Consistency in report generation is challenging but necessary. Developing repeatable methodologies and thorough QA processes ensures dependable results across report iterations. Continuous refinement and QA are critical to maintaining this consistency.

Optimal AI Decision-Making

Striking a balance between AI autonomy and user control is key. Developing a hybrid approach that maximizes efficiency while preserving user control is essential. This involves allowing the AI to handle routine tasks while users make critical decisions, requiring continuous monitoring and fine-tuning.



SOLUTION IMPACT

Our AI-powered sustainability reporting solution has revolutionised the analysis and presentation of environmental, social and governance (ESG) metrics. By automating data collection, visualisation, and report writing, significant efficiency gains have been achieved:

98%

Reduction in Data Collection Time:

Automation allows teams to focus on strategic insights rather than manual data gathering.

96%

Reduction in Chart and Table Creation Time:

Streamlined visual content generation minimises effort and enhances accuracy.

80%

Reduction in Report Writing Time:

Sustainability experts can now allocate more resources to high-value tasks, such as data analysis and stakeholder engagement.

These productivity enhancements have not only optimised the reporting process but also improved the accuracy, consistency, and timeliness of sustainability disclosures.



RESPONSIBLE AI ELEMENTS

Reliability

- The AI system uses SQL grounding to ensure factual accuracy based on vetted customer data.
- The RAG process reduces inconsistencies by grounding generated text in trusted data sources.
- Charts and tables generated via ChartJS rely on parameter configurations for consistent visualisations.

Security

- Avoiding direct SQL queries minimises risks of SQL injection, safeguarding the system's security.
- Data transformation through safe, predefined JSON schemas maintains the integrity of sensitive customer data.

Explainability

- Grounded SQL queries allow users to trace data origins, enhancing content transparency.

- ChartJS configurations provide clear visual origins, ensuring users understand each visual component.

Transparency

- Transparent input processes allow users to know which data is used in report generation.
- SQL grounding ensures all content is traceable to specific customer data, with no hidden data handling.
- HTML-to-PDF/Word conversion is user-visible, supporting review and editing before publication.

Accountability

- The AI operates only on data provided from the SCT database, preventing data misrepresentation.
- User-friendly interfaces allow Sustainability Experts to review and edit reports, integrating human oversight to ensure accountability in the final output.



Mrityunjay Upadhyay

Engineering Lead



Rahul Rajendran

Product Lead

Commvault Systems (I) Pvt Ltd - OVERVIEW

Commvault Systems Inc. was established in 1988 as a development group within Bell Labs, later evolving into a strategic business unit of AT&T Network Systems before becoming an independent, incorporated company in 1996. It is a leader in enterprise backup and recovery software solutions.

Commvault industry-leading cyber resilience and data protection solutions enable organizations globally to achieve continuous business in the face of any cyber challenge.

Commvault provides its software in a Software-as-a-Service (SaaS) model and Installed Software model, complemented by its Remote Managed Services Platform (RMS) and its internal cloud, commvault.com environment.



PROBLEM DESCRIPTION

Commvault leverages AI to address the following key challenges:

Data Automations:

- Organisations often struggle with identifying and protecting sensitive data within their infrastructure.
- Planning backup schedules and storage to meet resilience and recovery objectives can be challenging.
- Detecting malware or ransomware within backed-up data is difficult without AI to flag anomalies.

Process Automations:

- Backup and restore processes can experience failures due to difficulties in resource estimation, as well as optimising storage and restore resources.

Optimising User Experience (UX) with Generative AI:

- Users need help familiarising themselves with new or changed features, troubleshooting failures, and understanding how to use APIs for integrations and automations through a conversational interface.



SOLUTION HIGHLIGHTS



Data Automations utilises NER, Anomaly Detection and Regression Algorithms



Process Automations which continuously monitors data movements and predicts future demands and automates resource selection



Optimizing UX via Generative AI using Arlie the AI Assistant



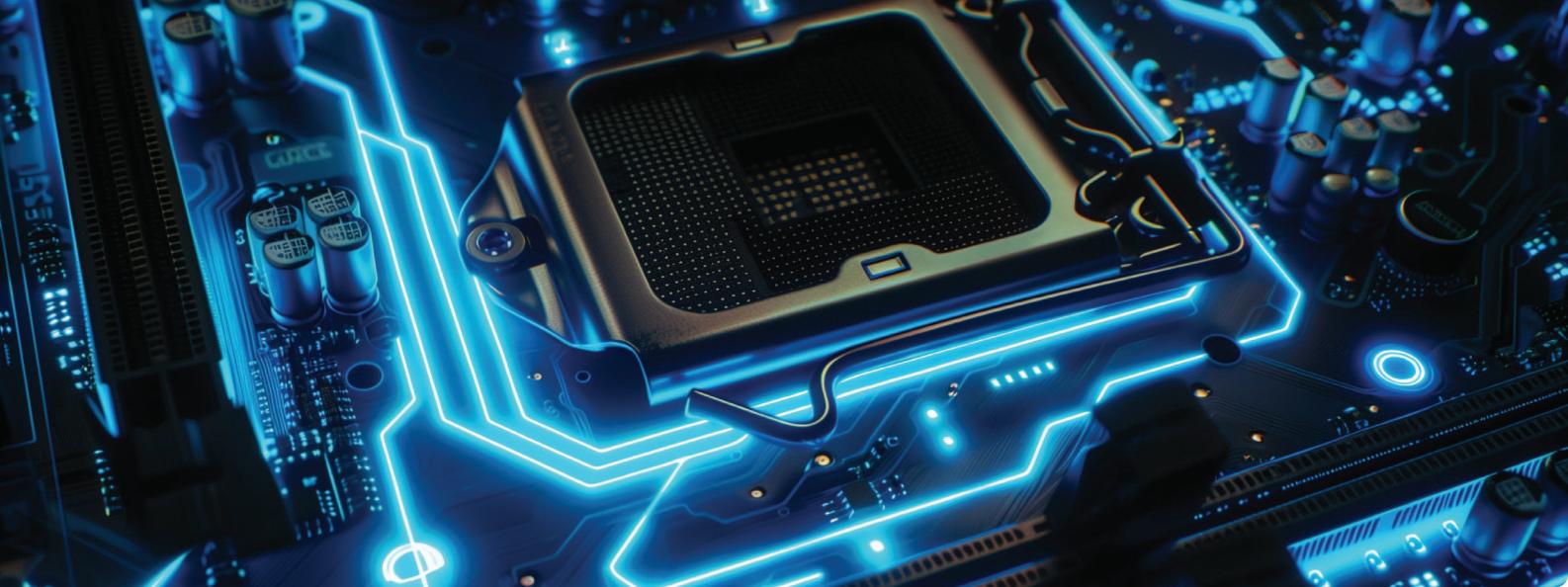
SOLUTION DESCRIPTION

Commvault's India Centre of Excellence has developed a suite of AI solutions to enhance cyber resilience and operational efficiency:

- **Data Automation:** Commvault uses Named Entity Recognition (NER) to identify and automatically classify sensitive data, including Personally Identifiable Information (PII), enabling automated actions such as export, deletion, or redaction. It optimises backup schedules to meet Recovery Point Objective (RPO) targets and manages data movement across regions using intelligent rules. Post-backup, Commvault identifies security risks by applying regression algorithms to detect file activity anomalies. In cases of compromised data, entropy baselining helps detect malware-encrypted files, safeguarding recoveries.
- **Process Automation:** Commvault automates resource allocation for data movement by

monitoring current loads, predicting future demands, and automating resource selection. It identifies and bypasses bottlenecks until resolved, monitors storage targets, and predicts capacity needs, enabling proactive storage provisioning. User activity and data pruning anomalies are also flagged.

- **Generative AI-driven UX via Arlie, the AI Assistant:** Commvault's automation capabilities are enhanced through generative AI, providing a streamlined UX. Arlie performs root cause analysis to troubleshoot operational errors, makes API and automation recommendations using natural language-driven code generation, creates guided UI walkthroughs based on semantic commands, and offers a conversational chatbot for product configuration and usage assistance.



DEVELOPMENT OF THE AI SOLUTION

Data Automation

Utilises Named Entity Recognition (NER), LOWESS Regression for anomaly detection, and SIMHASH-based entropy baselining.

Process Automation

Employs time series analysis and LOWESS Regression to flag anomalies.

Arlie, the AI Assistant

Leverages generative AI to provide a conversational experience, enabling users to operate the product, generate API code, and access troubleshooting guidance efficiently.

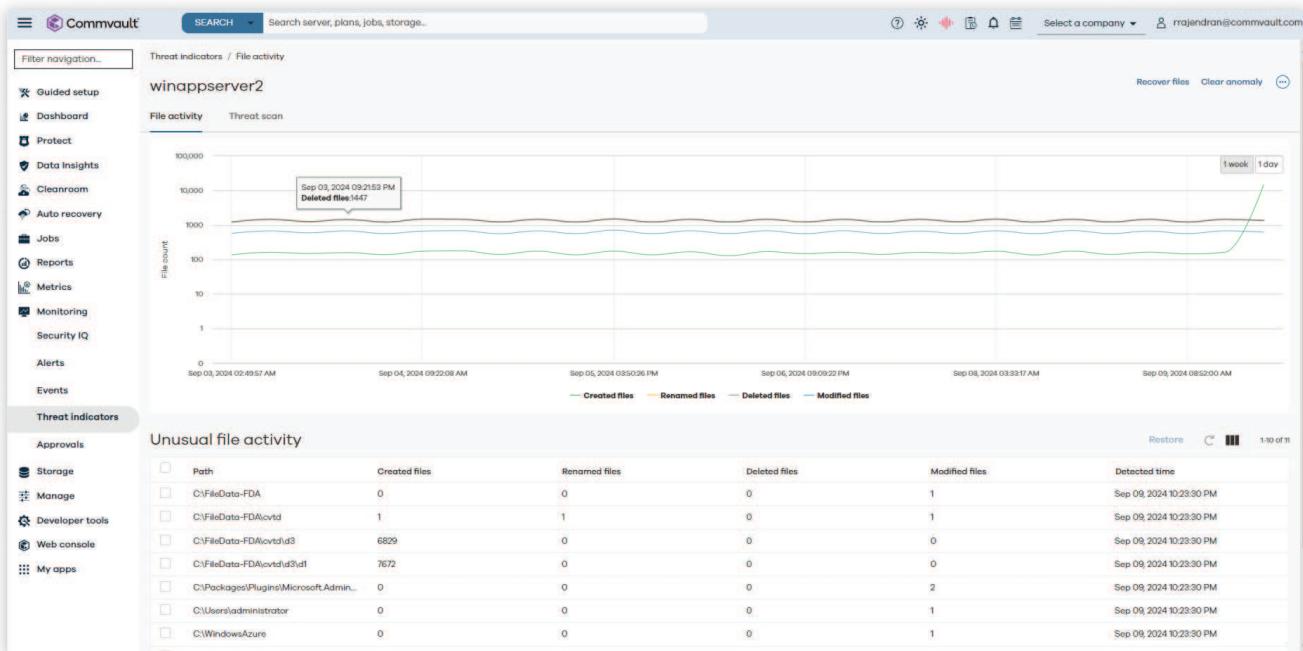


Image: Showing the Threat Indicators Dashboard of Commvault

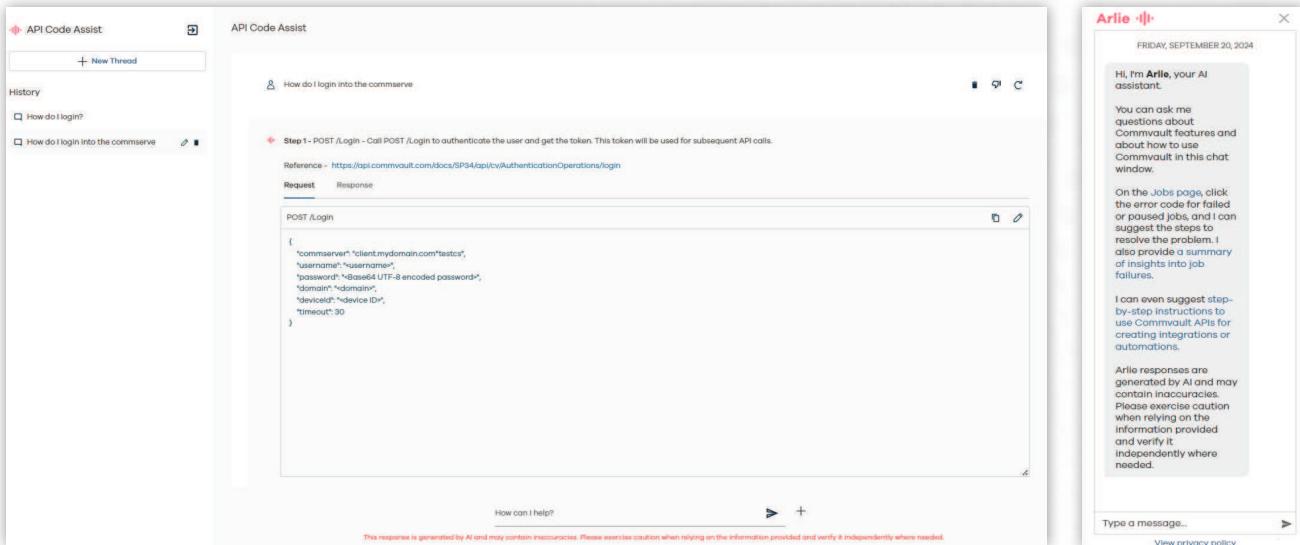


Image: Showing the Code Assist page of Commvault (L). The user interface of Arlie, the AI Assistant (R)



CHALLENGES

Data Procurement: Sourcing data that is representative, comprehensive, unbiased, and performs well in diverse customer environments was critical. This was especially difficult for identifying sensitive customer data where a wide variety of customer needs had to be met.

Synthetic Data Generation: Developing synthetic data to test AI features automatically was essential, particularly for generative AI features, which required innovative methods using large language models (LLMs).

Optimising User Experience: Ensuring an optimal user experience prior to the General Availability stage. This was addressed through Early Access Programmes and assessments of product-market fit.

Continuous Improvement: Ongoing monitoring and iterative enhancements are key to refining the AI solution.



SOLUTION IMPACT

Our AI-powered Enterprise Backup and Restore Solution has increased the business resiliency of our customers. By early detection and guided resolution of operational and security issues, it has achieved significant gains:

High Adoption Rates

Our data automations, process automations, and generative AI-driven UX features have seen significant usage.

Reduced Job Failures:

These features have helped minimise failed jobs in customer installations, enabling customers to optimise their installations to maximise business resilience, taking into account their unique operational needs and data characteristics.



RESPONSIBLE AI ELEMENTS

Inclusivity & Non-Discrimination:

Our AI models are trained and tested using diverse datasets, ensuring fairness and representativeness.

Reliability & Safety:

All mission-critical AI-generated recommendations are reviewed and approved by humans. User feedback, through like/dislike metrics, helps maintain accuracy.

Privacy:

Human supervision oversees our generative AI output to confirm anonymization. We prioritise Privacy by clearly indicating what data is used by the AI and exclude any sensitive data from the training pipeline.

Security:

AI models are safeguarded against attacks. Our AI features are tightly integrated within the Commvault® Cloud platform, which restricts access to its functionalities from outside the platform. Our industry-leading security features are in place, including role-based access controls (RBAC).

Transparency:

Product documentation explains all AI systems, and AI-powered features are explicitly marked, with users fully informed of AI involvement.

Explainability:

AI recommendations are accompanied by clear data sources, providing users with context for each recommendation.

Accountability:

A dedicated triage team periodically reviews AI system performance and recommends improvements.

Upholding Positive Human Values:

Commvault's AI systems are designed to protect customers' business operations and data from disasters and cyber-attacks, reinforcing positive human values.

Compliance:

AI systems follow rigorous certification processes.

By safeguarding sensitive data, protecting models from attacks, maintaining certifications, clearly labelling AI features, and ensuring human oversight for critical insights, Commvault upholds Responsible AI principles across all AI-driven features.



Shalini Sankarshana

Managing Director

Planview India Pvt. Ltd: Overview

Planview, a global enterprise software company based in Austin, Texas, specialises in project portfolio management (PPM) and strategic portfolio management solutions. Founded in 1989, Planview has steadily evolved, launching its web-based PPM software, Planview Enterprise, in 1997 and later transitioning to a cloud-based model in 2010. The company has experienced several ownership changes, including acquisitions by Insight Venture Partners and Thoma Bravo, with the most recent acquisition by TPG Capital and TA Associates in 2020 for \$1.6 billion. Planview's comprehensive suite of tools is designed to enhance organisational efficiency and collaboration across various sectors. Its core solutions include Strategic Portfolio Management (SPM), Project Portfolio Management (PPM), Enterprise Agile Planning (EAP), and Value Stream Management (VSM).



PROBLEM DESCRIPTION

In collaboration with its customers, Planview identified several key challenges that drove the development of AI tools:

Fragmented Tools and Data: Organisations often contend with isolated tools and siloed data, limiting effective decision-making and hindering operational insights.

Manual Data Management: Reliance on manual data collection and analysis is time-consuming, creating inefficiencies.

Bottlenecks in Execution: Recognising and resolving bottlenecks in project delivery is essential for maintaining workflow and meeting deadlines.

Risk Management: There is a need for early warning systems to detect potential issues before they impact project outcomes, allowing for proactive adjustments.

Data-Driven Insights: Organisations require actionable insights from extensive datasets to enhance strategic decision-making and improve predictability in delivery.



SOLUTION HIGHLIGHTS



Planview Copilot : An advanced generative AI assistant built on an agentic framework, featuring specialised agents trained on Planview's extensive datasets



AI summarizers streamline the creation of status reports by automatically gathering and condensing information from project data, providing clear and concise updates.



Sentiment Analysis an insightful advisor that equips employees at every level to take confident decisions



SOLUTION DESCRIPTION

Development of the AI Solution

Planview Copilot is an advanced generative AI assistant built on an agentic framework, featuring specialised agents trained on Planview's extensive datasets, including portfolio management, value stream management, and agile planning.

It integrates exclusive strategy-to-delivery data from Planview's solutions with insights

drawn from over 60 team tool connectors, delivering a comprehensive view of operational intelligence. By harnessing a robust data foundation, Planview Copilot uses a unified ontology powered by a Graph database and agent, enabling it to reveal relationships across data products and drive deeper, interconnected insights.

This sophisticated AI combines structured data with industry-leading methodologies

The screenshot displays the Planview Copilot interface. On the left, there's a 'OKR PROGRESS' section showing 'Objectives' and 'Key Results' with a progress bar from 'Sep 16, 2022' to 'Nov 21, 2023'. Below it is a 'ROADMAP' section with a timeline from April to December, listing projects like 'New Customer Portal' (Apr 1, 2023 - Oct 1, 2023), 'Retail Banking Web Update' (May 30, 2023 - Jan 31, 2024), and 'Loyalty Program' (Jun 30, 2023 - Feb 29, 2024). In the center, 'FLOW METRICS' include 'Flow Load' (down 15%), 'Flow Time' (up 5%), 'Flow Efficiency' (down 12%), 'Flow Velocity' (0%), and 'Flow Distribution'. To the right, a 'MY APPROVALS' sidebar lists tasks such as 'Approve Initiative New Portal UI' and 'Bryan Baldwin mentioned you in Global Mobilization'. A large chat window on the right shows a conversation with 'COPILOT' suggesting areas of concern based on the data.

such as Planview's Flow Framework, Agile and Scrum practices, and extensive product documentation, providing seamless onboarding, proactive guidance, bottleneck detection, and solutions to enhance users' strategy-to-execution journey. Central to this functionality is a Retrieval Augmented Generator agent that works cohesively with other agents to enhance decision-making.

Through natural language processing, Planview Copilot engages in conversational interactions, distilling complex insights into actionable recommendations. It delivers real-time support by answering questions, offering recommendations based on project status, sentiment, and risk assessments, and providing suggestive actions that can be executed on the user's behalf, with their approval.



CHALLENGES

Integrating Diverse Data Sources:

Planview faced the challenge of unifying data from a range of internal systems, third-party tools, and initiatives to provide comprehensive insights. Overcoming data silos was crucial, and establishing a robust platform data foundation was instrumental in achieving this integration.

Championing Responsible AI Practices:

Planview has defined a comprehensive approach to "Responsible AI" for the benefit of the organisation, its customers, and partners. This commitment prioritises transparency, mitigates bias, and upholds rigorous data stewardship standards. We proactively engaged with each customer to secure consent for AI-driven data use, ensuring all data is managed in line with GDPR regulations and consent-based practices.

Deriving Insights from Historical Data:

Planview leveraged AI and machine learning techniques to extract predictive insights from both historical and real-time customer data. This enables forecasting of outcomes, early warning signals, and identification of gaps between strategy and execution. However, maintaining high-quality data across all relevant domains remains an ongoing challenge.



SOLUTION IMPACT

Copilot for Augmenting Human Expertise:

Planview Copilot acts as an insightful advisor, supporting even the most seasoned business and delivery leaders in data analysis, decision-making, and execution. It equips employees at every level—from team rooms to the boardroom—with insights and recommendations rooted in best practices. Even accidental project managers are now empowered to take expert-level actions with confidence.

Boosting Efficiency and Productivity:

Tools such as summarisation features automate repetitive tasks, including daily and weekly reporting, by generating concise summaries of risks, issues, work in progress, stand-up reports, and release notes. These tools not only save time but also enhance knowledge sharing across teams, fostering an early warning system that mitigates hesitation in delivering challenging news.

Empowering Data-Driven Decisions:

Planview Copilot is designed to enable organisations to make well-informed, data-driven decisions. Leveraging a vast dataset across portfolio management, value stream management, and agile planning, it provides operational insights and recommendations through a unified, conversational interface, offering a single pane of glass across all tools.



RESPONSIBLE AI ELEMENTS

Privacy and Security:

We place paramount importance on safeguarding customer data by ensuring that no personally identifiable information (PII) is used in training AI models; this data is meticulously scrubbed in advance to maintain confidentiality.

Compliance:

We are steadfast in our commitment to upholding data handling best practices, ensuring compliance with GDPR and other relevant guidelines. This involves leveraging data regionality and processing protocols while adhering to the AI Act across various jurisdictions.

Accountability:

Our accountability framework integrates our privacy, security, and compliance practices, underscored by a dedication to transparency, reliability, and safety in all our solutions.

Transparency:

We endeavour to communicate transparently about the design and architecture of our AI solutions, including the platforms, providers, and versions of LLM models employed.

Explainability:

We harness the reasoning capabilities of LLMs to elucidate the “thinking” behind each generated response. This reasoning is readily accessible to end-users at any time, fostering a deeper understanding of the AI’s outputs.

Inclusivity and Non-Discrimination:

At present, we depend on LLM providers to manage inclusivity and non-discrimination aspects effectively.

Reliability and Safety:

We implement robust AI guardrails and a comprehensive quality assurance process to ensure that our AI solutions remain consistently reliable and safe, adhering closely to their intended purposes.

We maintain rigorous privacy, compliance, and security obligations to ensure that customer data is never accessed without explicit consent. When access is granted, it is executed in accordance with best security practices and global data handling policies.





Venkat Sriramagiri

CEO – Worldline Global Services

Worldline Global Services Overview:

Worldline is a global leader in digital payment and transactional solutions, committed to fostering sustainable economic growth and enhancing trust and security in society. To support this mission, Worldline Global Services (WGS), a fully owned subsidiary, was established to meet the group's technology and operational needs. WGS drives innovation, ensures operational excellence, and enables Worldline to deliver cutting-edge, environmentally friendly, and accessible payment solutions worldwide.



PROBLEM DESCRIPTION

The absence of a centralized and standardized approach to Generative AI implementation within the organization is hindering its effective utilization and potential impact:

Fragmented Development: Multiple isolated Proof of Concept (PoC) projects are being developed across various departments without coordination.

Inconsistent Standards: These initiatives do not align with group-wide standards and policies, leading to inconsistencies and potential compliance risks.

Limited Scalability: Without a cohesive strategy, successful PoCs cannot be easily scaled or replicated throughout the organization.

Unrealized Potential: This fragmented approach prevents the organization from fully leveraging Generative AI to address critical business challenges.

Governance Risks: Non-adherences to group policies may result in governance issues and potential legal or ethical risks.

This disjointed approach to Generative AI implementation is undermining the organization's ability to realize its full potential, streamline operations, and drive innovation across the enterprise.



SOLUTION DESCRIPTION

We are committed to building Paytech solutions using DevOps methodologies to deliver innovative, user-centric digital solutions that drive business transformation and create value. Our offerings provide data-driven insights and scalable platforms that help businesses remain competitive.

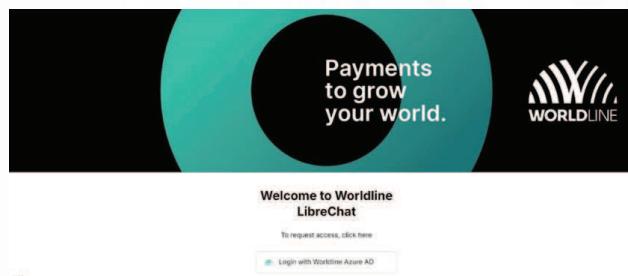
With over ten years of experience in India, we have developed tailored solutions for various sectors, including Financial Services, Mobility & e-Transactional Services, and Merchant Services. As a leading third-party processor, we offer comprehensive services across the payments value chain, managing international clients in the UAE, Sri Lanka, Bhutan, and Nepal.

Our capabilities include support for over 30 banks, 900,000 merchant touchpoints, and more than 60 million credit and prepaid cards. We operate across 5,000 cities and manage over 1 billion annual transactions, utilizing all payment methods available.

The development of AI Solution

Worldline has implemented a customized Generative AI-powered utility known as “Libre Chat,” which has provided significant benefits across various teams, departments, and technology squads. Libre Chat employs a multi-modal chatbot architecture, integrating Google Gemini models, Azure OpenAI, and Anthropic, allowing users to compare models for optimal results.

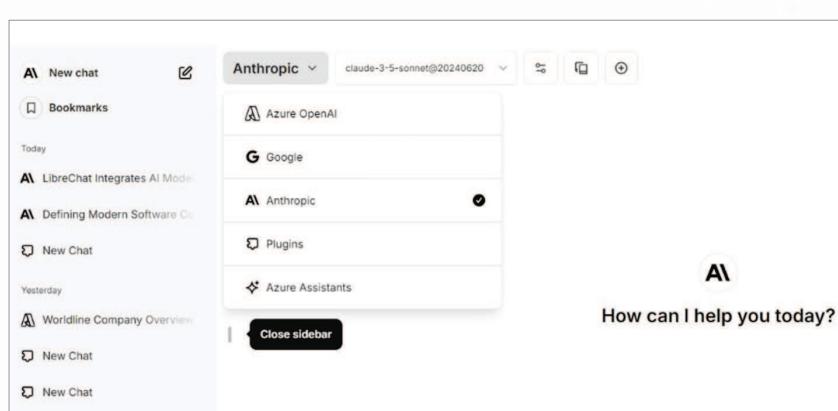
This utility facilitates the development of plugins tailored to specific business use cases and supports the creation of assistant chats for specialized purposes. It also offers seamless API

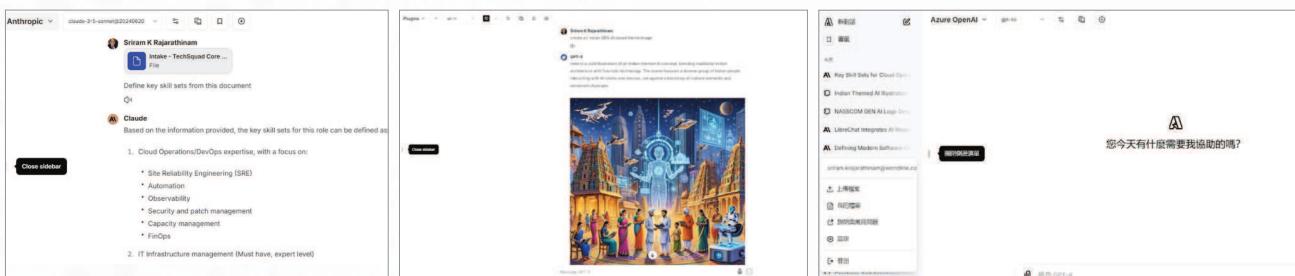


connectivity, advanced context management, and personalized experiences.

Additional features of Libre Chat include easy sharing, message flexibility, a multilingual user interface, file handling, code interpretation, and tool management. It also supports Hands-Free Chat with Speech-to-Text and Text-to-Speech functionalities, along with conversation import and export capabilities, robust search functionality, and web access.

This platform enables the development of customized plugins to address specific needs, such as procurement query resolution, finance reporting guidance, and integration with JIRA or Confluence for the development community. It acts as a co-pilot for projects, provides translation services, and facilitates call sentiment analysis for contact centers, as well as quality audit processes, among others. By offering these features, it empowers delivery and operations.





CHALLENGES

During this implementation of Libre Chat, one of the key challenges we faced was the diversity of hypotheses and isolated initiatives among the wider employee community and technology enthusiasts regarding the use of Generative AI. These disparate efforts, often misaligned with central deployment policies and group standards, resulted in confusion surrounding the utility's

purposes, usage, guidelines, eligible users and potential benefits.

However, following deployment, the programme experienced a transformative change curve that highlighted the significant benefits and ease of use of Libre Chat. This encouraged widespread adoption and ownership of the utility throughout the organization.



SOLUTION IMPACT

Rapid adoption: The implementation of Libre Chat has resulted in significant community-driven benefits, attracting approximately 7,000 active users in a remarkably short timeframe. This rapid adoption has led to notable improvements in delivery quality, efficiency, and overall performance across various areas of the organization.

Enhanced Data Safety: The platform provides robust multi-user secure authentication,

ensuring data safety, security while maintaining scalability.

This combination of widespread user engagement, tangible operational benefits, and strong security measures has positioned Libre Chat as a valuable asset in enhancing organizational productivity and innovation. Users have successfully developed 19 plugins across functional areas and tech teams, as well as over 90 assistants across the company.



RESPONSIBLE AI ELEMENTS

Libre Chat: Advanced Framework for Secure and Flexible AI Interaction

a. Inclusivity and Non-Discrimination

- Promotes accessibility through support for a multilingual user interface.
- Offers a customizable interface that accommodates both advanced users and newcomers.

b. Reliability and Safety

- Ensures robust performance monitoring via comprehensive configuration options and logging systems.
- Implements secure authentication methods, including email verification.

c. Privacy and Data Protection

- Provides local deployment options for offline AI service operation.
- Maintains secure authentication and user-specific data management.
- Stores user-specific datasets (e.g., Assistants) within individual profiles.

d. Enhanced Security Measures

- Supports multiple authentication options, including Active Directory (AD) and OAuth2-OIDC.
- Offers proxy and reverse proxy configurations for additional security layers.

e. Transparency and Open Development

- Embraces opensource development, ensuring transparency in system architecture.
- Enables conversation support in various formats for user accessibility.

f. Explainability and Context Understanding

- Implements features like conversation branching and forking, allowing users to explore different paths and understand context.

g. Accountability and Usage Control

- Utilizes user management and token spending tools to monitor and control AI system usages.

h. Compliance and Ethical Guidelines

- Adheres to organization specific rules and policies at Worldline.
- Incorporate safeguards against harmful or inappropriate content generation.
- Undergoes regular GDPR assessments to ensure data protection and privacy compliance.

This comprehensive framework ensures that Libre Chat maintains high standards of responsibility, security, and user-centric design while delivering advanced AI capabilities.

Libre Chat: Advanced Features for Secure and Flexible AI Interaction

a. Multi-User Secure Authentication

- Robust user management with authentication controls.
- Token spending tools for usage monitoring and allocation.

b. Comprehensive Configuration and Deployment Options

- Local deployment for offline AI services.
- Cloud deployment for enhanced accessibility and scalability.
- Proxy and reverse proxy configurations for optimized routing and security.

- Docker support for swift and consistent deployment
- Firebase CDN integration for reliable content delivery.
- Integrated logging system for performance and activity monitoring.

c. Advanced Authentication and Security Measures

- Flexible token usage management.
- Enterprise-level LDAP/Active Directory integration.
- Support for modern OAUTH-OIDC authentication protocols.
- Secure email verification and password reset functionality.

d. Open-source Development and Community Engagement

- Transparent platform built on public contributions.
- Active community support for development and continuous improvement.
- Enhancements driven by user feedback.

e. Extensive Customization Capabilities

- A wide array of customization options to tailor the platform to specific needs.
- Personalized user experiences through adaptable settings.

This comprehensive feature set ensures that Libre Chat provides a secure, flexible, and user-centric environment for AI interactions, suitable for various deployment scenarios and user requirements.





BANKING



Gurbans Chatwal

Vice President, Innovation and Intelligent Automation, Global Services, Fiserv

FISERV: Overview

Fiserv, Inc. (NYSE: FI), a Fortune 500 company, aspires to move money and information in a way that moves the world. As a global leader in payments and financial technology, the company helps clients achieve best-in-class results through a commitment to innovation and excellence in areas including account processing and digital banking solutions; card issuer processing and network services; payments; e-commerce; merchant acquiring and processing; and the Clover® cloud-based point-of-sale and business management platform. Fiserv is a member of the S&P 500® Index and has been recognized as one of Fortune® World's Most Admired Companies™ for 9 of the last 10 years.

Fiserv offers an engineering and architecture centre that provides innovative technology solutions in fintech and payments to global clients.

Global Services works across Fiserv for flagship solution development, testing, deployment and support, provided by associates in India and the U.S. We have operated in India since 2005 and have consistently delivered strong performance and innovative solutions through global delivery centers at Bengaluru, Chennai, National Capital Region and Pune that support clients around the world.

We also offer a complete spectrum of infrastructure and application management services across multiple solutions and platforms; and manage product engineering for several Fiserv solutions. Our Finance Shared Services and Integrated Business Services support key processes across the enterprise.



PROBLEM DESCRIPTION

In the rapidly evolving FinTech landscape, security vulnerabilities present a significant threat to business integrity, particularly for enterprises that handle vast amounts of sensitive financial data. Within our organisation, Fortify scans have identified numerous cyber vulnerabilities across our product offerings and technology stacks. This has escalated into a critical business priority, as these vulnerabilities could compromise both the integrity of our products and the trust of our users.

Addressing this remediation requires extensive operational efforts to mitigate the risks before new vulnerabilities emerge. Acknowledging the urgency and scale of the problem, we established a specialised task force to devise an innovative solution that would expedite the remediation process. This initiative culminated in the development of a dedicated Generative AI (GenAI)-enabled platform, complemented by an Integrated Development Environment (IDE) plugin.

The services provided by this platform automate vulnerability remediation, reducing manual effort by 30-40%. Furthermore, it delivers real-time feedback to developers, empowering them to address security concerns during the coding phase and

preventing new vulnerabilities from infiltrating the codebase.

This proactive approach not only accelerates current remediation efforts but also strengthens the code against future vulnerabilities.



SOLUTION DESCRIPTION

Development of the AI Solution

The **CyberShield.AI Platform** offers a robust, automated solution to address 10 critical types of security vulnerabilities within Java and .NET codebases, mitigating both current and emerging threats across fintech products. These vulnerabilities include:

.NET

- ◀ System Information Leak: External
- ◀ Misconfigured Content Security Policy: unsafe
- ◀ Misconfigured Content Security Policy: Missing Strict-Dynamic
- ◀ Password in Comment
- ◀ System Information Leak

Java

- ◀ Trust Boundary Violation
- ◀ Denial of Service: StringBuilder
- ◀ System Information Leak
- ◀ Log Forging
- ◀ Weak XML Schema: Unbounded Occurrences

Two guiding principles were established as a team of 15, comprising members from multiple product lines, embarked on developing the solution during a nine-day hackathon programme:

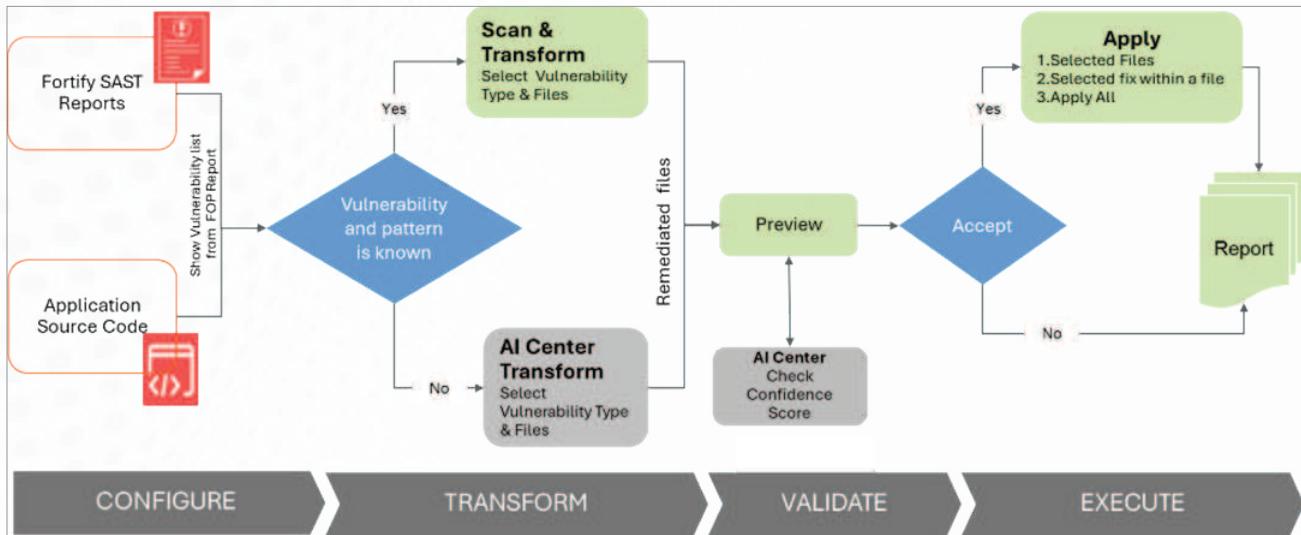
1. The solution had to be contextualised according to the organisational architecture framework and guidelines.
2. The solution was required to leverage large language models (LLMs) for:
 - Pattern Discovery and Remediation

- Confidence Scoring (to validate remediation for any Open Worldwide Application Security Project [7] (OWASP) Top 10 risks or memory leaks)

At the core of the platform are services specifically designed to identify, prioritise, and remediate vulnerabilities in real time. The key services of the platform are as follows:

- For identified vulnerabilities, technology-specific frameworks were employed to analyse code structure and remediate the issues highlighted in the Fortify report.
- If the vulnerability type is novel and not addressed in step one, or if a new pattern is detected among the listed 10 vulnerability types, the relevant code segment is passed to the LLM. This aspect of the solution is built using LangChain and returns the corrected code segment, which is then integrated as the remediated code.
- The Preview feature allows developers to review the remediated code and, if desired, obtain a confidence score from the LLM, indicating whether the remediation is accurate, whether no new vulnerabilities have been introduced, and whether no errors, such as memory leaks, have occurred. The confidence score is presented as a percentage to the developer.
- Integration with the LLM occurs through the organisation's AI gateway, which is equipped with compliance guardrails for enhanced security.

This approach provides developers with remediation solutions, even in instances where predefined rules and patterns are not available.



To enhance the developer experience, services from the Cybershield.AI platform have been integrated as plugins within the respective development IDEs. This integration enables us to ‘shift left’ in vulnerability remediation, establishing a robust foundation for sustainable security practices.





CHALLENGES

Complexity of Codebases:

Each type of vulnerability manifests in various forms, making it challenging to compile a comprehensive inventory of all types upfront. Given the diversity of code in Java and .NET stacks, identifying and remediating vulnerabilities necessitates the use of specific detection algorithms that require a profound understanding of coding styles, guidelines, and architectures across different product lines.

Evolving Threat Landscape:

Vulnerabilities evolve rapidly, complicating efforts to maintain an exhaustive library of remediation rules. With continuous updates being deployed, it is essential to keep pace with emerging threats and patterns effectively. We must also ensure that no new vulnerabilities or critical errors are introduced during the auto-remediation process.

GenAI Accuracy and Reliability:

While GenAI enhances flexibility, it may occasionally propose solutions that do not address the root cause, particularly in complex scenarios where historical patterns are lacking. Ensuring that GenAI's recommendations align with security standards while minimising false positives presents a delicate challenge.

Developer Adoption:

Integrating this solution into developer workflows necessitates a seamless developer experience and adequate training.

Organisational Adoption:

Given the high volumes of code to scan and remediate, the platform must scale efficiently and integrate effectively with organisational standards and policies concerning security, data privacy, and GenAI. It is imperative to ensure that no sensitive information is exposed or mishandled during the remediation process.



SOLUTION IMPACT

30 – 35%
effort reduction
through automated
vulnerability
remediation

50% of
vulnerabilities
addressed within the
first three months of
release

Availability of
**automated
remediation**
as plugin IDEs
for developers,
mitigating efforts
post Fortify scan
report

**Accelerate
buy-in from
developer
community**
through AI
suggested
remediation and
confidence checks

Beyond the initial success, the solution unlocks several other strategic benefits:

Enhanced Code Quality:

By integrating automated checks and GenAI driven solutions directly into the development workflow, the platform promotes a ‘shift left’ approach to security. This enables developers to identify and address vulnerabilities early, resulting in higher-quality code and more secure releases over time.

Improved Developer Productivity:

With reduced manual intervention, developers can concentrate more on addressing business challenges and driving innovation, rather than engaging in repetitive manual remediation tasks.

Reduced Long-Term Operational Costs:

By preventing new vulnerabilities from entering codebases and minimising future maintenance needs, the solution effectively lowers costs associated with security incidents and reduces reliance on extensive manual reviews.

Time to Market, Trust, and Compliance:

The reduction in vulnerabilities and the associated remediation efforts have enhanced customer confidence in our products. Furthermore, improved security practices facilitate compliance with evolving regulations and emerging vulnerabilities.



RESPONSIBLE AI ELEMENTS

Reliable and Safe:

The solution has been custom-built to adhere to organisation-specific guidelines when remediating code. The additional step of confidence scoring, which checks whether code corrections have introduced further vulnerabilities or defects, enhances the solution's reliability.

Secure:

The solution is hosted on-premises, while the large language model (LLM) is available on a private cloud. All services from the LLM are routed through a custom-built AI gateway, which is further fortified with guardrails that implement organisational policies.

Accountability:

Associates working on AI applications are prohibited from accessing systems until they have completed a mandatory training programme on responsible use and data ethics. In alignment with our published policies and strategic intent to “make it easier to use and quickly deploy AI safely and responsibly,” the organisational

structure and responsibilities are clearly defined and implemented. The AI Risk & Compliance group supports Delivery and Operations by:

- Providing guidance and advice to Delivery Teams and the AI Operations Centre of Excellence (COE).
- Determining Fiserv's AI governance policies, guidelines, and standards.
- Overseeing the AI Risk Management Framework.
- Ensuring data compliance.
- Reviewing alignment with strategic objectives and audit requirements.
- Being accountable for the AI defensive strategy.

Compliance:

All AI solutions comply with the organisation's published policies on Data Ethics (including roles and responsibilities), Global Ethics and Privacy, Data Use Policy, cybersecurity policy, and Responsible AI guidelines.





Broadridge®



Kishore Seshagiri

Executive Director

Broadridge Financial Services India Private Limited: Overview

For nearly six decades, we have provided the critical infrastructure that underpins corporate governance, capital markets, and wealth and investment management. Our industry-specific technology, solutions, and data intelligence drive business transformation, enabling you to stay ahead of today's challenges while preparing for what lies ahead.



PROBLEM DESCRIPTION

Capital markets firms are encountering a range of new challenges, including reduced settlement cycles, an ongoing pursuit of efficiency, increasing trading velocity, and the emergence of new working methods, to name but a few. While some of these drivers have been present in the past, their combination is exerting significant pressure on firms' legacy technology and operating models. There is an urgent need to automate manual, time-consuming tasks to maintain operational efficiency in day-to-day activities.



SOLUTION HIGHLIGHTS

A scalable, secure, resilient AI Platform that enables all Broadridge segments to build AI solutions including gen AI in a democratic scalable manner.

Multiple post-trade AI solutions including OpsGPT, Fail Predictor etc.

Built a platform and internal tools for AI



SOLUTION DESCRIPTION

Development of the AI Solution

Artificial Intelligence (AI) stands to revolutionise the efficiency and scalability of firms' post-trade operations, empowering teams to undertake complex research activities while delivering critical insights into key risk indicators (KRIs). Generative AI (GenAI) allows us to develop modern, chat-based, user-friendly interfaces that enable teams to access data and insights within seconds. This capability fosters the flexibility of teams and talent across multiple geographies, asset classes, and more.

Fast Trade Matching:

The T+1 framework demands rapid trade matching, and AI automates this essential process by swiftly identifying discrepancies and ensuring compliance with accelerated settlement cycles.

Trade Lifecycle Oversight:

AI continually monitors trade lifecycle events to promptly highlight bottlenecks, facilitating proactive intervention and preventing potential delays.

Real-time Data Analysis:

AI processes real-time market data, aiding in trend identification, risk mitigation, and the optimisation of trading strategies within the T+1 framework.

Reduction of Manual Work:

By automating rule-based tasks, AI accelerates settlements while significantly minimising the risk of human error.

Enhanced Compliance:

AI employs rule-based algorithms to validate trades against T+1 regulations, thereby mitigating the likelihood of compliance breaches.

Risk Mitigation:

Through real-time monitoring and predictive analytics, AI identifies potential settlement risks, substantially reducing failures and financial losses.

Client Services:

AI enhances customer support by providing rapid responses and tailored guidance throughout the new settlement cycle.

Complex Data Analysis:

AI enables swift and accurate data insights, ensuring transparency and accessibility for timely decision-making.

Scalability:

AI is designed to scale effortlessly to meet the demands of T+1 without necessitating a complete infrastructure overhaul.



SOLUTION IMPACT

Our current estimates suggest that the application of Generative AI could significantly alleviate the immediate operational risks and cost burdens associated with T+1 settlement cycles. In specific areas impacted by T+1, the integration of Generative AI could enhance operational efficiency by as much as 50%, while simultaneously mitigating risks, curbing rising costs, and improving overall governance. This advancement would bolster firms' capacity to scale operations and manage operational risks effectively in a compressed settlement environment.

The utilisation of natural language processing empowers users to access data and insights seamlessly, along with enhanced reasoning capabilities to predict the next best action and seamlessly integrate these recommendations into operational and governance workflows.

Firms that harness the power of this technology can unlock value that is not only critical for

meeting T+1 requirements but also pivotal for driving long-term transformation within their operational functions.

At Broadridge, we are innovating through architectural design patterns that, alongside robust safety and accuracy controls, facilitate the responsible implementation of Generative AI technology. Our approach is grounded in principles of compliance, safe interfaces, data privacy, and entitlement-driven data access, complemented by a strategic selection of large language models (LLMs) to guide our product development.

Our unique position as both a technology and operations provider at scale within the industry equips us with the optimal capability to innovate and transform through this technology. Above all, we are dedicated to cultivating trust with this technology — an essential component for any successful Generative AI implementation.





Smriti Goenka

Sr. Product Manager

Berkadia Services India Private Limited: Overview

Established in 2009 as a joint venture between Berkshire Hathaway and Leucadia National Corporation (now Jefferies Financial Group), Berkadia stands as a leader in the commercial real estate sector. We deliver a comprehensive suite of services specifically designed for our multifamily and commercial property clients, harnessing strong relationships and transformative technology. Our dedicated teams excel in selling, financing, and servicing commercial real estate, supporting our clients across every stage of the asset lifecycle. Our distinctive ownership structure enables us to prioritise our clients' interests, creating a marketplace that provides a consistently superior experience.



PROBLEM DESCRIPTION

- The organisation receives unstructured, lengthy, multifaceted, and complex documents from clients daily, making tasks such as navigation, research, and filing tedious and time-consuming. By digitising these documents and leveraging AI to provide users with timely responses to their queries, productivity is boosted, and valuable time is saved.
- A vast amount of information is stored across the organisation's numerous internal proprietary databases, leading to excessive time and energy spent toggling between sources. Utilising a single AI-driven solution to retrieve answers based on user queries or prompts significantly enhances efficiency, effectiveness, and responsiveness.



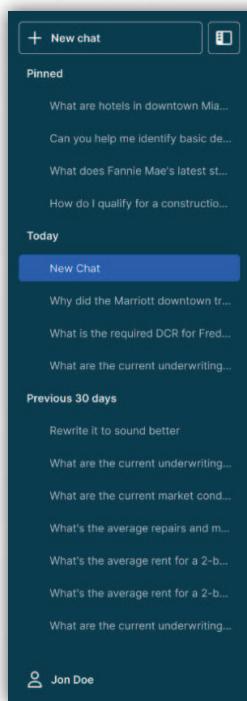
SOLUTION DESCRIPTION

Berkie is a secure virtual assistant developed by Berkadia to deliver efficient, creative responses while addressing security concerns associated

with popular Generative AI tools. It integrates extensive document libraries and large datasets from the real estate industry, enabling users

to pose and analyse complex questions with ease. Berkie's capabilities are further enhanced through Machine Learning, allowing it to extract valuable data from real estate documents. Key features include intuitive document access, sophisticated data integration, and advanced machine learning for data abstraction, all underpinned by a strong focus on trust and accuracy, facilitated through confidence scores and transparent reasoning. Ethical priorities such as explainability, security, and human-in-the-loop design are also integral to Berkie's architecture.

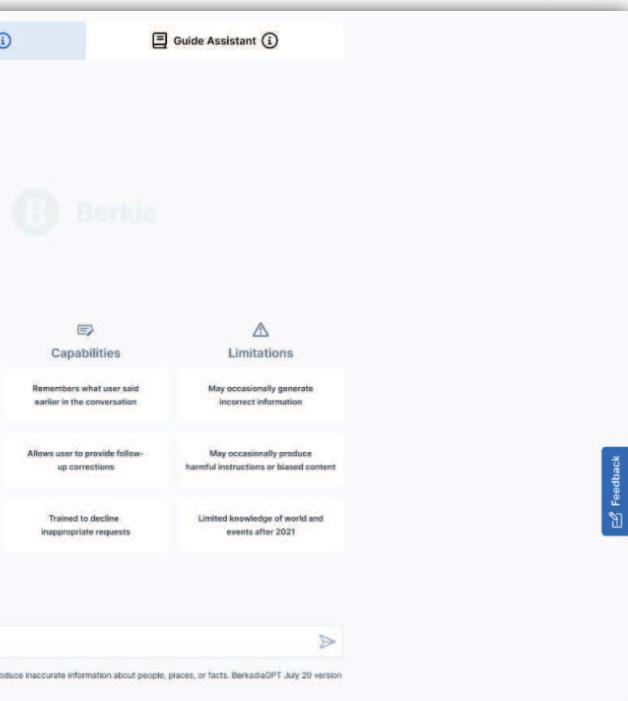
Chat interface for internal Proprietary information



Development of AI solution

- Digitising commercial real estate (CRE) documents and applying AI to deliver timely responses directly from these documents significantly boosts productivity and saves valuable time.
- Employing a single-source AI to retrieve answers from information spread across multiple applications and databases provides a highly efficient and responsive solution, driven by user-specific queries and prompts.

Chat interface for Commercial Real Estate business documents





CHALLENGES

Segregating Sensitive Data through Access Control:

One of the primary promises of Generative AI is to offer flexible, multi-dimensional access to a diverse range of data sources. However, this flexibility introduces a complex challenge in data access management. As our AI application connects to various data sources, each user requires a unique combination of accessible datasets, while others remain restricted. This complexity necessitates a robust, sophisticated access control system to manage permissions effectively, ensuring each user has access solely to appropriate data.

Fostering Trust in AI Outputs:

AI systems can yield inconsistent results and, unlike traditional software, may produce different outputs for identical inputs. Building user confidence in AI outputs requires designing a user experience that empowers users to utilise these results effectively. This can be achieved by integrating confidence scores that reflect the system's relative certainty and by providing insights into the reasoning and references supporting the system's conclusions.

Measuring Accuracy in Subjective Outputs:

Many AI outputs are subjective, making accurate measurement difficult. Standardised evaluation criteria that focus on semantic similarity and user preferences are essential.

A major challenge is ensuring secure access to relevant information across multiple data sources, which requires sophisticated access controls. Building user trust is crucial, necessitating reliable methods to measure accuracy and address "hallucination"—when AI generates incorrect information.

Additionally, outdated datasets can hinder insights. Key points include the need for advanced access control, trust-centred user experiences, and consistent methods for measuring AI output accuracy and efficacy.



SOLUTION IMPACT

Operational Efficiencies

Good Net Promotor Score

Reduction in manual intervention

Business Process simplification and transformation

Berkie has significantly improved workflows at Berkadia by streamlining processes and reducing the time required for document analysis and data querying. The platform has boosted productivity and facilitated better decision-making by enabling rapid access to accurate information and actionable insights.

With robust security measures, Berkie mitigates the risk of accidental disclosure of confidential information, reinforcing data security. Employee testimonials, including those from Roni Caesar and Luca Albisetti, underscore the tool's effectiveness in enhancing their efficiency and productivity.

Testimonials

Berkie has provided value with clear explanations and accurate information, helping me navigate complex real estate terms and processes efficiently. This support has made my work at Berkadia more effective. I look forward to Berkie having advanced capabilities to summarize documents and datasets, further enhancing my productivity and decision-making.

Roni Caesar, VP Underwriting

Berkie provides value by revising marketing materials, summarizing dense documents like lease and franchise agreements, answering technical questions, and offering quick market summaries to help form an initial understanding of various markets, all of which saves me time.

Luca Albisetti, Real Estate Analyst, Hotels and Hospitality Group

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BUY



RETAIL

*Kimberly-Clark



Rahul Pandey
Lead Analytics Strategist



Robin John
Lead GenAI Product Manager

Kimberly-Clark: Overview

Kimberly-Clark Corporation is a prominent American multinational company renowned for its production of personal care products, consumer tissue, and professional hygiene products. Established in 1872, the company is headquartered in Irving, Texas. Kimberly-Clark boasts a portfolio of well-known brands, including Huggies, Kleenex, Cottonelle, Scott, and Kotex.

In India, the company operates a Digital Technology Services (DTS) unit, which employs approximately 450 professionals. This unit focuses on various domains, including SAP, Robotic Process Automation (RPA), Artificial Intelligence and Machine Learning (AI/ML), Salesforce and application development, as well as Enterprise Data Management.



PROBLEM DESCRIPTION

Kimberly-Clark operates multiple mills that produce diapers, tissues, wipes, and other products, each with specific processes and dedicated machinery. The company regularly recruits new talent and upgrades existing operators from one machine type to another. Each new hire or upgrade undergoes extensive training. However, becoming proficient with the machinery takes time. During this training

phase, operators depend on experienced leads and well-curated training materials for guidance. Unfortunately, there are instances when connecting with a lead or accessing training content is not feasible, leading to potential reductions in productivity, quality issues, or, in the worst cases, accidents. **How can we improve the day-to-day operations of a shop floor worker?**



SOLUTION HIGHLIGHTS

A GenAI powered multilingual conversational interface that allows blue-collar workers to get responses on common machine-related issues, best practices, and access additional resources for more details on the topics asked.



SOLUTION DESCRIPTION

This is a chat-based solution (non-voice) and it supports multiple languages.

Development of AI Solution

With the aid of Generative AI, Kimberly-Clark has developed a conversational companion for operators, which is trained on best practices and

machine-specific configurations. Additionally, it incorporates insights from historical problem areas and solutions provided by subject matter experts (SMEs). Operators can connect to this companion at any time using their mobile or handheld devices to ask questions or seek clarification on any uncertainties.



RESPONSIBLE AI ELEMENTS

Reliability

Safety

Privacy

Our solution adheres to reliability & safety as we are expected to provide consistent responses for repeated questions, and it sticks to the context of the enterprise. Our solution also adheres to all enterprise data privacy guidelines.





SOLUTION IMPACT

The solution went live in Q1 2024 and has since received incremental updates to enhance data scope and feature offerings. A significant advantage of this implementation is the decreased reliance on immediate line managers and subject matter experts (SMEs) for answers to non-critical queries. This has resulted in productivity savings and quicker turnaround times, as obstacles are resolved more rapidly. We are actively monitoring ROI based on productivity improvements and tracking usage metrics. With an average of approximately 10,000 questions addressed, till date we are achieving significant \$ savings in terms of SME's time & training costs per month.



CHALLENGES

A significant challenge encountered was the synthesis of data from various repositories, including SharePoint, on-premises databases, cloud databases, and plant-specific storage solutions. Our initial step involved identifying which knowledge was readily consumable and which required transformation or additional effort to be made accessible. We commenced the process with one unit and one category, gradually scaling up to expand the repository sizes. However, we still do not have access to 100% of the data, as many mills store information in separate repositories. We are scaling our solution to ingest more data sources and support more file formats to help us expand our user-base.



Rohit Punnoose

Senior Director - Data Sciences

Target Corporation India Pvt. Ltd. Overview

Target in India functions as a fully integrated global capability centre and strategic partner for Target Corporation, the US-based retailer. Since its establishment in Bengaluru in 2005, the Target in India office has played a pivotal role in supporting headquarters activities across various domains, including marketing, technology, finance, digital services, and supply chain management. For further information, please visit the official Target in India website.



PROBLEM DESCRIPTION

Target is a multibillion dollar US based retailer with nearly 2000 stores and presence on Target.com. we sell over 100K items through our stores.

Each item in Target's catalogue undergoes a lifecycle, and implementing markdowns (discounts) at the appropriate moments is crucial for optimising sales. When a new product hits our shelves, sales typically surge for a period until they reach a turning point. Following this inflection, demand tends to decline, prompting the need for discounts to encourage sales, free up valuable retail space, and prevent items from being sent to salvage.

Previously, the process of determining discount rates was carried out manually through rule-based decision-making, which proved to be time-consuming, especially considering the millions of items that enter clearance each season.

To address this challenge, we have developed and implemented a machine-learning solution that generates accurate demand forecasts and optimises the pricing strategy for effective markdown schedules. This approach maximises profitability, even in the face of fluctuating market conditions and evolving customer demand.



SOLUTION HIGHLIGHTS

Development of AI Solution

The markdown optimisation solution systematically recommends prices at scale—across thousands of products at various store locations and on Target.com—on a weekly basis, carefully considering inventory levels and seasonal trends. This innovative approach facilitates dynamic, market-driven pricing, a capability that was previously unavailable, and offers the flexibility to adapt swiftly to the evolving shopping patterns of our guests. Addressing such a complex challenge, which requires the ability to learn from historical demand patterns and sales trends, is beyond the scope of conventional analytical models. Instead, it necessitates the implementation of machine learning algorithms that leverage training data from historical datasets to generate accurate and actionable price recommendations.

The entire solution was meticulously developed in-house by the Target in India office in Bengaluru (Bangalore), engaging collaboration among the Product, Technology, Data Science, and Clearance Strategy Analyst teams. This interdisciplinary approach seamlessly integrates machine learning decisions with human judgement, resulting in a solution that was successfully rolled out across over 2,000 Target stores in the United States within a remarkably short timeframe.

The success of this initiative can be largely attributed to the close collaboration among various teams in India. From the outset, these teams co-created the solution alongside business stakeholders to ensure it encompassed a strong business perspective and context. The technology teams employed simple yet explainable models, recognising the paramount importance of instilling user confidence in the outputs. They relied heavily on A/B testing during the initial stages to measure and demonstrate the effectiveness of the AI solution, thereby validating its impact on business outcomes and gathering feedback for continuous model improvement.

Subject Matter Experts (SMEs) played a vital role throughout the project lifecycle, validating outputs and establishing a feedback loop for ongoing enhancements. Additionally, the development of a model-trust framework that incorporated automated back-testing was crucial for ensuring reliability and accuracy. Ultimately, the model's scalability was achieved because the solution was embedded within a robust business framework that utilised Continuous Integration and Continuous Deployment (CIC/CD) practices, thereby enabling real-time operational execution and facilitating agile responses to market demands.



RESPONSIBLE AI ELEMENTS

Inclusivity & Non-Discrimination:

The AI system is designed using aggregated data that does not include any personally identifiable information or sensitive customer data. This approach mitigates the risk of bias or discrimination against any group of customers or communities.

Reliability & Safety:

The outputs of the AI system undergo rigorous testing through multiple user testing phases to ensure consistency across each test run. These results are validated by business users for reliability and are subject to ongoing automated reliability testing.

Privacy:

The data utilised in the AI system is devoid of personal identifiers or individual customer information. Furthermore, the data is securely stored in a Data Warehouse that can only be accessed by data scientists who require access for their work.

Security:

The AI system is constructed to be accessible solely through secure API calls. The continuously evolving code is regularly assessed for vulnerabilities by code security experts to ensure robust protection.

Transparency:

Documentation for the AI system is comprehensively recorded in a secure repository, detailing the code flow, process rules, capabilities, and limitations. Extensive comments within the code enhance clarity, facilitating easier debugging and enhancements.

Explainability:

The AI system employs explainable algorithms, avoiding ‘black box’ methodologies. Outputs are readily convertible into insights that assist end users in understanding how various factors influence the final output variable—specifically, the markdown prices of items at the store level.

Accountability:

The AI system is monitored for any outliers by human end users who assess system performance against acceptable limits. Human teams possess the authority to override decisions that fall outside these parameters.

Protection and Reinforcement of Positive Human Values:

Through optimisation, the AI system ensures that inventory is effectively managed during the markdown phase, minimising the need for salvage at the end of the sales cycle. This reduction in salvage not only enhances operational efficiency but also lessens environmental impact by curbing product wastage.

Compliance:

The AI system is subject to regular reviews by the team to identify and address any compliance challenges, in accordance with prevailing regulatory requirements.



SOLUTION IMPACT

Revenue Optimization:

Significant Cost Savings: The solution has resulted in millions of dollars saved in discount-related markdowns by strategically adjusting prices. It offered a balanced approach, avoiding overly aggressive or shallow discounts throughout the duration of the clearance programme. Importantly, each item in a store received an independent level of discount, a shift from the previous practice of applying uniform discounts across all items. This nuanced discounting strategy contributed to substantial markdown savings.

Enhanced Sell-Through Rates: By prioritising salvage reduction within the objective function, the solution achieved sell-through rates exceeding 70%. This focus minimised expenditure

on liquidation and salvage management, thereby optimising overall profitability.

Operational Workload: Pricing analysts have significantly reduced the time required to generate forecasts on the financial performance of clearance programmes, moving from a 24-hour manual process to an efficient turnaround of less than 10 minutes. This remarkable time saving has a substantial impact when scaled across thousands of programmes annually.

Customer (Guest) Experience: Through demand-based price optimisation, customers now enjoy access to high-quality products that are in demand, all offered at appropriate discounts. This approach enhances their shopping experience, as it provides reassurance that Target's product assortment remains both desirable and affordable.



CHALLENGES

Data Availability:
Ensuring that hundreds of millions of rows of transactional data are fed into the system daily within established cut-off times is crucial for providing the necessary information to facilitate optimal decision-making.

Scalability:
The capability to process millions of item-price-location optimal decisions weekly through a complex machine learning pricing engine presents a significant scalability challenge. This is addressed through engineering innovations and an architecture that utilises Kafka.

Data Quality:
Maintaining data integrity is essential; therefore, we conduct regular audits and certifications to ensure that the data is clean and free from anomalies.

Data Security:
All data is securely stored within internal databases. Data security is reinforced through stringent access controls and authentication measures.





Nataraju Vusirikala

Senior Director - Data Science & Engineering

Walmart Global Tech: Overview

At Walmart Global Tech, we operate at the forefront of innovative technologies, driven by a vision to transform the retail sector. As a people-led and technology-powered organisation, we spearhead advancements that positively impact millions of lives around the world. Our associates empower us to develop innovative solutions that support the operations of the world's leading retailer, fostering digital solutions that ensure our resilience and readiness for the future.



PROBLEM DESCRIPTION

At Walmart, all our solutions are designed to align with our vision of helping customers save money and live better. A key aspect of our Marketplace business is ensuring the reliable and timely delivery of products ordered through our website.

Before the implementation of 'Smart Tags', the business encountered challenges in balancing delivery speed with the predictability of delivery dates. Historically, many products were promised for delivery on a specific day but were often dispatched earlier than anticipated. To avoid delays, sellers frequently added significant buffers to their delivery promises, which resulted in numerous orders arriving ahead of schedule.

This situation presented two primary issues from the customer's perspective. Firstly, receiving orders earlier than expected led to surprises and unplanned circumstances. Secondly, customers were deterred from purchasing certain products because the delivery times did not align with their expectations compared to competitors, resulting in lost order conversions and revenue for our company.



SOLUTION HIGHLIGHTS

Our sellers and their millions of amazing products help make Walmart Marketplace one of the fastest-growing eCommerce platforms in the U.S. This solution focus on three key areas:

Assortment growth dashboard

Smart tags for delivery

Success hub



SOLUTION DESCRIPTION

The 'Marketplace' is designed to bridge the gap between sellers worldwide and Walmart's customers by developing comprehensive solutions that span the entire seller lifecycle. We streamline the onboarding process to seamlessly integrate sellers onto our platform, provide tailored recommendations to help them expand their business, and offer robust support solutions to address and resolve any challenges they encounter while interacting with Walmart and its customers. Some of our key solutions include:

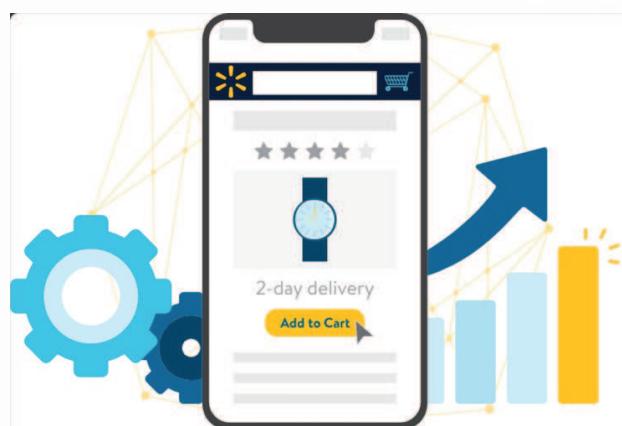
Smart tags for delivery:

This Smart tags for delivery (<https://marketplace.walmart.com/smart-tags/>): This machine learning (ML)-driven solution predicts, with high precision, the number of days required to deliver a seller's product to various regions within a country. It ensures an optimal balance between faster shipping and the avoidance of unexpected early arrivals of packages.

The Development of AI Solution

Smart tags:

We developed multi-layer AI models to predict the number of days required for the delivery of individual products to various locations within a country by analysing deliveries from multiple sellers across a wide range of products. Our algorithm operates weekly across the sellers' product catalogs, storing its inferences in a comprehensive table. These delivery time predictions are then displayed to customers when they browse product pages on our website.



To facilitate accurate predictions, we extracted a robust and diverse set of training data, accounting for various delivery scenarios, which allows us to estimate delivery times even before an order is placed. Additionally, we enriched the data with contextual factors, such as the seasonality of specific categories based on the month of delivery.

Smart Tags has received a patent for its unique characteristics and innovative approach. The algorithm is meticulously monitored and regularly retrained to ensure that emerging data trends are consistently captured, thereby maintaining its accuracy and effectiveness.



RESPONSIBLE AI ELEMENTS

Reliability and Safety:

Our AI solution undergoes rigorous testing to ensure its reliability and safety. This includes cross-validation and verifying the model's accuracy using sample data not involved in its training. We also closely monitor the solution for any signs of data drift, retraining the models frequently to adapt to recent changes in data trends.

Transparency:

We meticulously document every step involved in developing the model, including the types of data utilised, features extracted, and algorithms applied to derive the final inferences. These steps are reviewed with subject matter experts within the business to identify any anomalies.

Explainability:

Our solution provides multiple methods to elucidate its workings to various stakeholders, such as sellers and business owners. This includes detailing the significance of each feature used in the AI model and how each feature influences the final inference (i.e., delivery days for a specific product and location combination). These explanations help stakeholders understand the underlying AI model utilised for inference.



SOLUTION IMPACT

Smart Tags has been operational for several years now and has significantly transformed the experience for both sellers and customers, positively impacting our business. Currently, a substantial percentage of marketplace orders can be attributed to Smart Tags, generating millions of dollars in revenue and facilitating the delivery of millions of orders to date.



CHALLENGES

Some of the most significant challenges we encountered included scaling, generalising for new scenarios, and maintaining high accuracy. At Walmart, we manage millions of customers and billions of transactions; therefore, this AI solution needed to support a scale commensurate with the computing infrastructure required to host it, while also adhering to latency and cost constraints. Furthermore, we required a solution that could adapt as the business expands,

accommodating new sellers, product types, and customer locations. To achieve this, we developed sophisticated techniques to ensure the AI solution performs effectively with unseen data and incorporated guardrails to generalise the model for new scenarios. Additionally, we implemented monitoring and alerting mechanisms to detect and address any deviations from performance expectations.



Team

Srikanth Srinivasan

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Srikanth Srinivasan is the Vice President and Head of Membership & Outreach at Nasscom, where he leads initiatives to enhance member engagement and drive business growth. With over 30 years of results-oriented marketing experience across industries such as Information Technology, Telecom, eCommerce, and Industrial Automation, he has a proven track record of driving profitability through strategic planning and effective business solutions. Srikanth specializes in partner management, team leadership, and implementing outreach initiatives that foster collaboration and innovation within the Nasscom ecosystem.

M Chockalingam

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Chockalingam brings 25 years of experience in content, data, and AI across sectors like corporate, startups, non-profit, government, and legal. A certified data scientist, he specializes in deploying large-scale AI solutions. At nasscom, he leads technical initiatives, helping AI startups and SMEs implement AI in their businesses.

Praveen Mokkapati

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Praveen is focused on developing India's AI ecosystem through concerted efforts to enable AI adoption at scale, nurturing startups, community building among others. In addition, he also leads the Telangana AI Mission (T-AIM) for the Government of Telangana.

Anish Sahay

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Anish is an accomplished Sales Leader with 21+ years of career spanning across IT, Analytical Instruments, Banking and Advertising industries. In his current role as the Head of GCC & BPM Initiatives @ nasscom, he is focused on driving the growth, talent, emerging technologies & hubs, and innovation charter for these two very significant business segments of the Indian IT industry.

Shruti Mishra

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Shruti Mishra an experienced professional with over 12 years in software industry. She leads all GCC initiatives at nasscom, focusing on nurturing India's GCC ecosystem by driving collaboration and innovation within established GCCs. Her strategic priorities include accelerating new GCC entries to India through key partnerships.



About Us

nasscom represents the voice of the \$250 billion+ technology industry in India with the vision to establish the nation as the world's leading technology ecosystem. Boasting a diverse and influential community of over 3000 member companies our network spans the entire spectrum of the industry from DeepTech and AI start-ups to multinationals and from products to services, Global Capability Centres to Engineering firms. Guided by our vision, our strategic imperatives are to accelerate skilling at scale for future-ready talent, strengthen the innovation quotient across industry verticals, create new market opportunities - both international and domestic, drive policy advocacy to advance innovation and ease of doing business, and build the industry narrative with a focus on Trust, and Innovation. And, in everything we do, we will continue to champion the need for diversity and equal opportunity.

The nasscom GCC department plays a crucial role in strengthening India's IT-BPM ecosystem by bringing international expertise, practices, and industry leaders to the country. GCCs contribute significantly to job creation and capability development within Indian organizations. They support workforce upskilling through collaborations with academic institutions, build skilling programs, and engage with startups to drive innovation. This department actively supports India's digital transformation by fostering partnerships, facilitating knowledge exchange, and developing a globally competitive talent pool through targeted initiatives.

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