happiest minds
The Mindful IT Company
Born **Digital** . Born **Agile**

AI & GenAI in Action:

Real-World Case Studies of Transformation

www.happiestminds.com

Enhancing Productivity and Efficiency at Coca-Cola Beverages Vietnam with an Innovative Gen AI Conversational Interface

"I am proud of the fact that we were able to create a tool that has the potential to make a real difference in unleashing the productivity of our employees and we are only scratching the surface with Generative AI. We had confidence to partner with Happiest Mind through this journey and the team didn't disappoint us. They were able to work in an agile manner and their technical expertise coupled with deep understanding of Coca Cola business helped us to launch this product within few weeks."

Rahul Shinde
Vice President & CIO,
Coca Cola Beverages Vietnam

About the Client

Coca-Cola Beverages Vietnam operates plants in Ho Chi Minh City, Da Nang, and Hanoi, generating more than 2,200 indirect jobs through its supply chain and more than 1,400 direct jobs. The company continuously enhances and offers a variety of high-quality beverages, including low-sugar and sugar-free product lines, while diversifying designs and increasing business coverage globally. Coca-Cola's beverage brands in Vietnam include Coca-Cola, Coca-Cola Light, Coke Zero, Sprite, Fanta, Minute Maid Nutriboost, Minute Maid Teppy, Schweppes, Dasani, and Aquarius, as well as Fuzetea+ bottled tea, Georgia canned coffee, and Thumps Up Charge energy drink.
Coca-Cola Beverages Vietnam is a member of the Swire Coca-Cola Limited, a wholly-owned subsidiary of Swire Pacific Limited, since the completion of acquisition in January 2023.

Client Requirements

Coca-Cola Beverages Vietnam identified two critical business challenges requiring technological transformation to enhance productivity and operational efficiency:

Streamlining HR Processes:

The HR policy information was fragmented across multiple documents and systems, making it challenging for employees to locate relevant information. This inefficiency impacted productivity and slowed decision-making. The company needed a centralized solution to:

01 Consolidate HR-related policy documents, including payroll (e.g., pay, overtime, tax deductions), attendance, goals management, shift details, and insurance policies.

02 Support a bilingual interface for both English and Vietnamese documents.

03 Facilitate faster access to policies and improve the onboarding experience for new employees.

Optimizing Cooler Productivity:

Monitoring the ROI of coolers installed at customer premises was a complex process requiring access to multiple systems. The company sought a solution to:

04 Enable seamless integration of customer segmentation data (Gold/Silver/Bronze) from SAP to assess performance.

05 Provide actionable insights to asset management teams and sales representatives to identify high-priority customers and outliers.

06 Streamline querying and visualization of cooler performance metrics for better decision-making and operational alignment.

Happiest Minds Solution

Happiest Minds adopted a consultative approach, collaborating with Coca-Cola Beverages Vietnam's strategic team during a discovery phase to design and implement two transformative solutions powered by Generative AI (GenAI).

To address the HR efficiency challenge, Happiest Minds developed a Retrieval-Augmented Generation (RAG) solution integrated into Microsoft Teams. This solution enabled employees to access HR policy documents and FAQs seamlessly. The policy documents were converted into vectors stored in a vector database, facilitating quick and precise retrieval using Azure OpenAI's Large Language Model (LLM). A natural language interface allowed employees to query payroll, attendance, insurance policies, and more in both English and Vietnamese. Additionally, a feedback mechanism was implemented to refine the system and improve response accuracy over time.

For monitoring cooler productivity, Happiest Minds designed a RAG-based solution integrated with Microsoft Teams and connected to the CDE Dashboard. This system leveraged customer segmentation data from SAP to provide actionable insights into cooler performance across various locations. The solution supported natural language queries such as identifying top-performing customers, analyzing gaps for achieving better performance, and highlighting newly tagged customers needing attention. These capabilities streamlined data access and provided sales representatives and asset management teams with real-time insights to optimize cooler placements and strengthen retailer relationships.

Value Delivered

01 Simplified and accelerated access to HR policies, resulting in faster responses to employee queries.

02 Enhanced onboarding experience for new hires, improving their learning curve.

03 Significantly improved employee productivity by reducing time spent searching for fragmented policy information.

04 Delivered actionable insights on cooler performance based on customer segmentation, locations, and performance metrics.

05 Enabled informed decision-making for sales representatives and asset management teams, optimizing cooler placements.

06 Streamlined workflows by reducing the reliance on multiple systems, saving time and enhancing operational efficiency.

By harnessing the power of Generative AI and leveraging Microsoft's Azure platform, Happiest Minds enabled Coca-Cola Beverages Vietnam to achieve their objectives of enhanced productivity and operational excellence. These tailored solutions not only addressed the company's immediate challenges but also laid a strong foundation for future growth and innovation.

Revolutionizing Medical Research with GenAI at SKAN

"Happiest Minds' GenAI-powered Research Assistant has significantly streamlined our processes at SKAN by automating time-intensive tasks like summarizing research papers and organizing projects. This tailored solution has enhanced efficiency and collaboration, helping us focus more on critical aspects of our research. It's a meaningful step toward advancing our scientific initiatives. This partnership exemplifies the synergy between technology and scientific progress"

Dr. Yogesh Shouche
Director, SKAN

About the Client

SKAN is a renowned not-for-profit medical research trust committed to pioneering advancements in the fields of Ageing and Neurological sciences.

Collaborating with globally reputed institutions, SKAN's research spans critical areas such as gut microbiome, stem cells, human genetics, molecular biology, and bioinformatics.

Driven by the mission to enhance scientific knowledge, SKAN embarked on a transformative journey to streamline and elevate its research capabilities.

Client Requirements

The traditional research methodologies at SKAN presented several challenges that hindered efficiency and collaboration. These included:

01 Managing Large Volumes of Research Content:

Researchers faced difficulties analyzing extensive amounts of research papers and documents manually, leading to inefficiencies and slower progress in critical projects.

02 Extracting Key Insights:

The time-intensive process of identifying relevant insights from vast amounts of unstructured data delayed innovation and decision-making.

03 Enhancing Collaboration:

The absence of a centralized, intuitive platform for researchers to discuss and share insights created barriers to effective teamwork and innovation.

04 Ensuring Secure and Organized Access:

A need for secure user authentication and an organized repository to streamline access to research documents and collaboration tools.

Happiest Minds Solution

Happiest Minds developed a cutting-edge Generative AI-based Research Assistant tailored to address SKAN's unique challenges and requirements. This AI-driven solution was designed to automate labor-intensive tasks, enhance collaboration, and secure data access. The solution included the following features:

- Automated Research Summarization: A tool to process uploaded PDFs and web content, generating concise summaries of research papers, and allowing researchers to quickly grasp essential insights.
- Interactive Chat Interface: Researchers could engage in intuitive, project-specific chat sessions to ask questions, discuss findings, and gain deeper insights.
- Project and Content Management: The application allowed users to create multiple projects with associated research documents and web URLs, ensuring an organized workflow.
- User Authentication: Secure access through Active Directory (AD), ensuring only authorized personnel could access sensitive data.
- Real-Time Notifications: Instant updates on project activities and summary generation kept researchers informed and on track.
- Feedback Module: Researchers could provide feedback on the generated summaries and chat interactions, enabling continuous improvement of the AI model.
- Content Download Capability: Summarized content could be downloaded or copied as Word documents, enhancing usability and accessibility.
- Usage Analytics: Email-based reports provided insights into usage statistics and engagement, supporting data-driven improvements.

Value Delivered

The implementation of the GenAI-based Research Assistant brought transformative benefits to SKAN, including:

01 Enhanced Productivity: Automated summarization of research papers enabled researchers to focus on critical analysis and innovation rather than manual reading and extraction of insights.

02 Streamlined Collaboration: The interactive chat interface fostered seamless communication and teamwork, driving greater innovation and faster discoveries.

03 Organized Workflow: Centralized project and content management, coupled with real-time notifications, ensured researchers could effectively manage and prioritize their work.

04 Data Security: Secure user authentication protected sensitive research data, ensuring compliance with privacy standards and maintaining organizational integrity.

05 Scalable and Intuitive Solution: The user-friendly interface and downloadable content capabilities made the solution accessible and adaptable to diverse research needs.

By integrating Generative AI into their research processes, SKAN has revolutionized its workflow, positioning itself as a leader in medical research innovation. This transformative solution not only optimizes productivity and collaboration but also lays the foundation for groundbreaking discoveries that have the potential to positively impact millions of lives.

Enhancing User Experience for Happiest Health with a Personalized Generative AI Chatbot

"We are excited to present hAppl as a transformative force in the health and wellness knowledge domain. We are confident that the simplicity of hAppl will enable consumers to easily chat about health and wellness concerns and get personalized responses curated from our treasure trove of over 4000 articles based on insights shared by thousands of doctors and other experts. This will ultimately contribute to improved health outcomes and well-being for all. Notably, hAppl achieves an impressive average response time of 3-4 seconds per query, highlighting its efficiency and effectiveness in delivering timely information to users."

Anindya Chowdhury
President and CEO, Happiest Health

About the Client

Happiest Health is a leading healthcare information portal in India, known for its extensive repository of health and wellness knowledge.

The platform caters to a global audience by providing diverse content formats, including articles, web stories, videos, podcasts, and magazines.

Their mission is to deliver accurate, easily accessible health insights to consumers across all demographics.

Client Requirements

Happiest Health sought to overcome challenges related to delivering personalized, context-rich user experiences.

With over 6,000 content pieces and growing, visitors found it difficult to navigate the static, keyword-based search engine to locate precise, relevant information.

The lack of interactivity further hindered user engagement and limited the platform's ability to maximize its potential as a go-to healthcare knowledge source.

The organization needed an advanced solution to:

01 Deliver nuanced, context-aware responses tailored to user queries.

02 Increase engagement by introducing an interactive, intuitive platform.

03 Reduce the time and effort required for users to find relevant content.

04 Scale with the growing volume of health-related articles and resources.

Happiest Minds Solution

Happiest Minds collaborated with Happiest Health to develop a first-of-its-kind Generative AI-powered chatbot in the Indian healthcare domain. Leveraging cutting-edge technologies, the solution transformed user engagement by addressing the limitations of traditional search engines.
Key Features of the Solution:

Generative AI and Retrieval-Augmented Generation (RAG): The chatbot integrates Generative AI capabilities with RAG to provide accurate, conversational, and context-aware responses by analyzing the client's repository of articles.

Semantic Search: Advanced semantic algorithms enable the chatbot to comprehend the intent behind user queries, retrieving the most relevant results in real time.

Dual-Layer Session Management:
- For logged-in users: Personalized interactions based on authenticated sessions, including features like "My Recent Conversations" and "Trending Queries."
- For anonymous users: Context continuity through browser sessions, ensuring a seamless user experience.

Scalable and Secure Architecture: Designed using Microsoft Azure's ecosystem, the solution ensures high scalability, robust performance, and compliance with Responsible AI principles.

Feedback Mechanism: Users can flag responses to further refine the chatbot's accuracy and reliability.

Technologies Used

01 **Frontend:** Azure Static Web Apps, React with TypeScript

02 **Backend & Data Processing:** Azure App Service, Azure Functions, Azure Cosmos DB, Microsoft Semantic Kerne

04 **AI & ML Components:** Azure Open AI (LLM), Hugging Face Transformers, Azure AI Search

05 **Security & Monitoring:** Azure Key Vault, Azure APIM, Azure Application Insights

Value Delivered

The implementation of the Happy chatbot brought significant improvements to Happiest Health's platform:

01 Enhanced User Experience: Delivered personalized, conversational responses that reduced frustration and increased engagement.

02 Improved Efficiency: 60% of searches were redirected to the chatbot, reducing reliance on manual search and cutting the average time to find information by 50%.

03 Higher Satisfaction Rates: The conversational style and accuracy of responses improved overall user satisfaction and retention.

04 Scalable Solution: Enabled seamless handling of growing content while maintaining quick response times (3–4 seconds per query).

05 Operational Benefits: Reduced manual effort, optimized search mechanisms, and enabled better utilization of the platform's knowledge base.

Redefining Performance and Learning Management for a Prominent Credit Union Service Organization with Generative AI

About the Client

The client is a prominent U.S.-based organization that vitally supports financial institutions by ensuring regulatory compliance and driving employee performance. With an unwavering commitment to innovation, our client serves as a trusted partner, enabling businesses to navigate the complexities of the financial sector effectively.

Client Requirements

Our client faced the dual challenge of managing an ever-expanding repository of regulatory documents and enhancing employee performance in a fast-paced, compliance-driven industry. Specific needs included:

01 **Efficient Knowledge Management:** Sorting through millions of documents and incident reports to extract actionable insights.

02 **Interactive Performance Management:** Providing managers with data-driven insights to personalize coaching and improve employee engagement.

03 **Scalable Learning Tools:** Empowering employees with practical, scenario-based training to bridge the gap between learning and real-world applications.

04 **HR Process Optimization:** Simplifying access to HR resources and reducing dependency on HR teams for routine inquiries.

Happiest Minds Solution

Happiest Minds partnered with the client to design and deliver a Generative AI-powered ecosystem that redefined their approach to performance management, learning, and HR processes.

The solution was built on Microsoft Azure and Azure OpenAI services, ensuring scalability, security, and advanced capabilities. It included three transformative components:

1. Manager Assist

This module was created to provide managers with actionable insights and enable data-driven decision-making.

01 Integrated Data Insights: The system aggregates employee performance metrics, feedback reports, and engagement data from multiple sources.

02 AI-Powered Queries: Managers can ask natural language questions like, "What are John's strengths in team projects?" or "How can I improve team productivity?"

03 Tailored Coaching Recommendations: The AI analyzes data and provides customized coaching tips and actionable strategies to help managers improve employee engagement and team outcomes.

By empowering managers with real-time insights and specific recommendations, Manager Assist fosters personalized coaching and efficient performance management.

2. HR Assist

Designed to streamline HR processes, this module makes HR-related resources accessible and reduces dependency on HR personnel for routine inquiries.

01 Comprehensive Knowledge Integration: The AI system is trained on employee handbooks, organizational policies, and HR documents.

02 Conversational Assistance: Employees can query the system with questions like, "What is the leave policy?" or "How do I apply for training reimbursement?"

03 Instant Responses: The AI provides accurate answers within seconds, eliminating the need to navigate complex portals or wait for HR support.

This feature not only improves employee satisfaction but also allows HR teams to focus on more strategic initiatives.

3. Learning Assist

A groundbreaking feature that bridges the gap between theoretical training and real-world application.

01 Scenario-Based Learning: Employees can engage in simulations of real-life situations, such as managing a difficult customer or conducting performance feedback sessions.

02 Dynamic Persona Modeling: The AI creates virtual personas that adapt based on user interactions. For example, a customer persona might start as polite but gradually become challenging, testing the user's problem-solving and communication skills.

03 Skill Reinforcement: By integrating content from the organization's LMS, standard operating procedures (SOPs), and knowledge bases, Learning Assist reinforces theoretical learning through immersive, hands-on practice.

This interactive approach ensures that employees not only understand concepts but also gain the confidence to apply them effectively in their roles.

Unified Functionality and Impact

The solution leverages Microsoft Azure and advanced Large Language Models (LLMs) for natural language processing, data integration, and adaptive learning.

It ingests data from LMS, SOPs, and policy documents, providing a centralized knowledge repository while maintaining secure architecture to ensure privacy and regulatory compliance.

Together, these features have revolutionized our client's operations by automating routine tasks, providing real-time insights, and delivering immersive training experiences.

As a result, our client has elevated employee engagement, accelerated decision-making, and positioned itself as an innovator in performance and learning management.

Value Delivered

01 Enhanced Operational Efficiency: Automated document analysis and knowledge retrieval significantly reduced the time and effort required to extract key insights.

02 Empowered Workforce: Simulation-based training bridged the gap between theoretical learning and practical application, leading to improved on-the-job performance.

03 Streamlined HR Processes: Instant, accurate responses to employee queries reduced the administrative burden on HR teams, allowing them to focus on strategic priorities.

04 Data-Driven Decision-Making: Managers received actionable insights that enhanced their ability to coach and manage teams effectively, fostering a culture of continuous improvement.

05 Future-Ready Scalability: The solution's modular design ensures seamless integration of additional use cases, supporting our client's evolving business needs.

06

The partnership between our client and Happiest Minds has transformed performance and learning management, setting a new standard in the financial sector. By leveraging Generative AI, our client has empowered its workforce, streamlined operations, and positioned itself as a leader in regulatory compliance and employee performance.

Happiest Minds' innovative solutions continue to drive tangible results, enabling our client to navigate challenges with agility and redefine success in the modern financial landscape.

Enabling Intelligent Cooking by Leveraging AI for Food Classification for a Leading Smart Oven Manufacturer

About the Client

The client is a leading manufacturer of smart ovens, offering cutting-edge kitchen appliances designed to simplify and enhance the cooking experience. With a strong focus on innovation, the company integrates AI and IoT technologies to provide intuitive and intelligent cooking solutions. Their smart ovens utilize built-in cameras and sensors to automate cooking processes, ensuring precision and ease of use for consumers worldwide.

Client Requirements

The client sought to improve the capabilities of their smart oven by incorporating AI-driven food recognition and classification. They faced two key challenges:

Accurate Food Classification:

Identifying a wide variety of food items required extensive image labelling to train deep learning models. This process was time-consuming, costly, and difficult to scale.

User Experience Enhancement:

Many users lacked cooking expertise, making it challenging for them to utilize the smart oven effectively. Additionally, the complex control interfaces, including touchscreens, mobile apps, and voice commands, posed usability hurdles for non-tech-savvy consumers.

To address these challenges, the client needed an AI-powered solution capable of accurately recognizing food items and simplifying the cooking process for a seamless user experience.

Happiest Minds Solution

Happiest Minds collaborated with the client to design and implement an AI-driven solution leveraging a Large Multimodal Model (CogVLM). The solution incorporated multiple AI-powered enhancements:

Accurate Food Classification:

01 AI-Powered Food Recognition & Classification: Implemented a zero-shot object detection model using CogVLM, allowing the smart oven to identify food items without requiring extensive pre-labelled datasets. The model was fine-tuned with a custom food image dataset, enhancing accuracy and adaptability.

02 Image Quality Assessment: Integrated an OpenCV-based algorithm to assess image clarity, lighting, and focus. This feature ensured high-quality food recognition by notifying users to retake images if necessary.

03 Automated Cooking Assistance: Leveraged AI-driven culinary knowledge to recommend cooking techniques, ingredient pairings, and optimal temperature settings, providing a guided cooking experience tailored to users' skill levels.

04 Simplified User Interaction: Enhanced usability by streamlining control interfaces. AI-driven automation enabled intuitive voice commands, touchscreen gestures, and mobile app interactions, making the smart oven more accessible and user-friendly.

05 Stain Detection for Maintenance: Developed a dual-layer stain detection algorithm—an OpenCV-based version for real-time detection within the oven and a cloud-based CogVLM-powered version for more advanced analysis.

06 Data Storage & Model Improvement: Implemented a feedback loop where misclassified food images were manually corrected and used for continuous model retraining, ensuring improved recognition accuracy over time.

Value Delivered

01 Enhanced Cooking Precision: AI-driven food recognition enabled automatic adjustments to cooking parameters, ensuring consistently well-prepared meals.

02 Improved User Experience: Simplified control interfaces and intelligent recommendations made cooking more accessible to all users, regardless of their culinary expertise.

03 Reduced Training & Maintenance Costs: Zero-shot object detection minimized the need for extensive dataset labelling, cutting down model training expenses and deployment time.

04 Optimized Performance & Reliability: Continuous monitoring and retraining of the AI model ensured long-term accuracy and adaptability to new food items.

05 Responsible AI Implementation: Integrated data privacy measures and Azure's security protocols to safeguard user information while maintaining compliance with industry standards.

By harnessing the power of AI, Happiest Minds enabled the client to revolutionize the smart cooking experience, delivering an innovative, user-friendly, and intelligent kitchen solution. This transformative approach not only enhanced product functionality but also laid the foundation for future advancements in AI-driven culinary technology.

happiest minds
The Mindful IT Company
Born Digital . Born Agile

www.happiestminds.com

About Happiest Minds Technologies

Happiest Minds Technologies Limited (NSE: HAPPSTMNDS), a Mindful IT Company, enables digital transformation for enterprises and technology providers by delivering seamless customer experiences, business efficiency and actionable insights. We do this by leveraging a spectrum of disruptive technologies such as: artificial intelligence, blockchain, cloud, digital process automation, internet of things, robotics/drones, security, virtual/ augmented reality, etc. Positioned as 'Born Digital. Born Agile', our capabilities span Product & Digital Engineering Services (PDES), Generative AI Business Services (GBS) and Infrastructure Management & Security Services (IMSS). We deliver these services across industry groups: Banking, Financial Services & Insurance (BFSI), EdTech, Healthcare & Life Sciences, Hi-Tech and Media & Entertainment, Industrial, Manufacturing, Energy & Utilities, and Retail, CPG & Logistics. The company has been recognized for its excellence in Corporate Governance practices by Golden Peacock and ICSI. A Great Place to Work Certified™ company, Happiest Minds is headquartered in Bengaluru, India with operations in the U.S., UK, Canada, Australia, and the Middle East.

To know more about our offerings. Please write to us at **business@happiestminds.com**