

About Us

Overview

Clientele

Achievements

Partners



4000+ **Employees**



1500+ Clients

2000+

Products Engineered





10 Global Offices



50+ Countries



1500+ **Applications** Developed





Development Centers



85% **Clients Retention**



12+ Awards





Google Cloud



1,00,000+ sq.ft. Office Space



22+ **Industry Verticals** < / > 20+

Million Development Hours

Magento Magento



25+

YEARS OF

EXCELLENCE

Great Place

To Work.

Certified

Certified To Deliver Quality





This is to affirm that

NOVA ASCEND DYNAMICS

Organizational Unit: Software Development Unit

has been appraised at

Maturity Level 5

of the Capability Maturity Model Integration for Development,

Version 3.0



ISO

9001:2015 Quality Management

ISO

20000-1:2011 IT Management ISO

27001:2013 Information Security

ISO

22301:2012 Business Continuity Management

How we help

Nova Ascend Dynamics has been a trusted Digital Partner for global brands & new age disruptors in the Manufacturing industry. Businesses partner with us to build & leverage digital capabilities to optimize costs, operate better, provide phenomenal CX, make data driven decisions & build new revenue channels.

Natural Language Processing (NLP)

- Text Analysis
- Chatbots & Assistants

Custom Language Models (LLMs)

- Al-driven chatbots
- Personalized interactions

Data-Driven Insights

- Trend analysis
- Strategic recommendations

Creative Design Assistance

- Graphic design
- · Video editing

Personalized Marketing Campaigns

- Targeted messages
- Increased engagement

Operational Efficiency

- Task automation
- Workflow optimization

Product Development

- Rapid prototyping
- Feature optimization

What We Do

Team Augmentation

A team of 4000+ Battle Tested engineers across 100+ Different Stacks.

We are your Digital Factory, dedicated teams to supercharge your development throughput.

0 Operational Overheads.

Agile & On Demand.

Fixed Scope

We offer meticulously crafted project specifications and timelines for cutting-edge development, seamless integrations and feature-rich solutions.

The Nova Ascend Dynamics approach ensures your projects are delivered with precision and excellence.

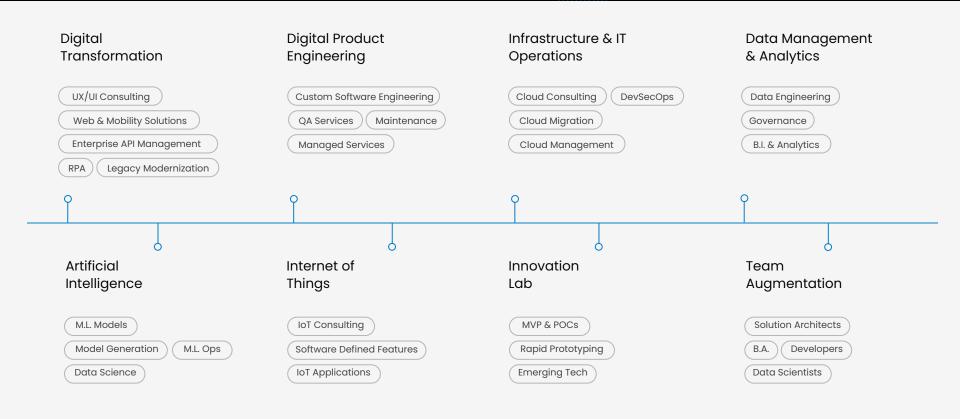
Managed Services

Our IMS services helps enterprises to run Business as usual.

With strong SLA driven services, 24x7 Support, Governance and Technology expertise, we help to optimize processes and costs.

Our Expertise

We help businesses wherever they are in their digital journey. From consulting for a **digital transformation** to carving out a **technology roadmap**. Our expertise helps you to **drive ROI** from your digital initiatives.



Selected Clientele























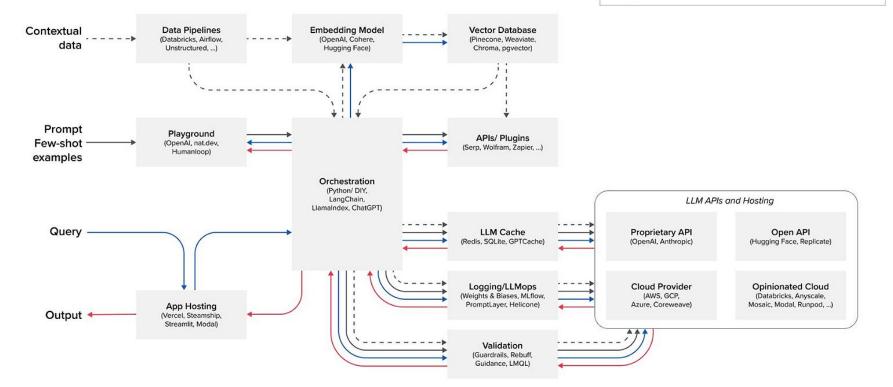








Emerging LLM App Stack



LEGEND

Gray boxes show key components of the stack, with leading tools/systems listed

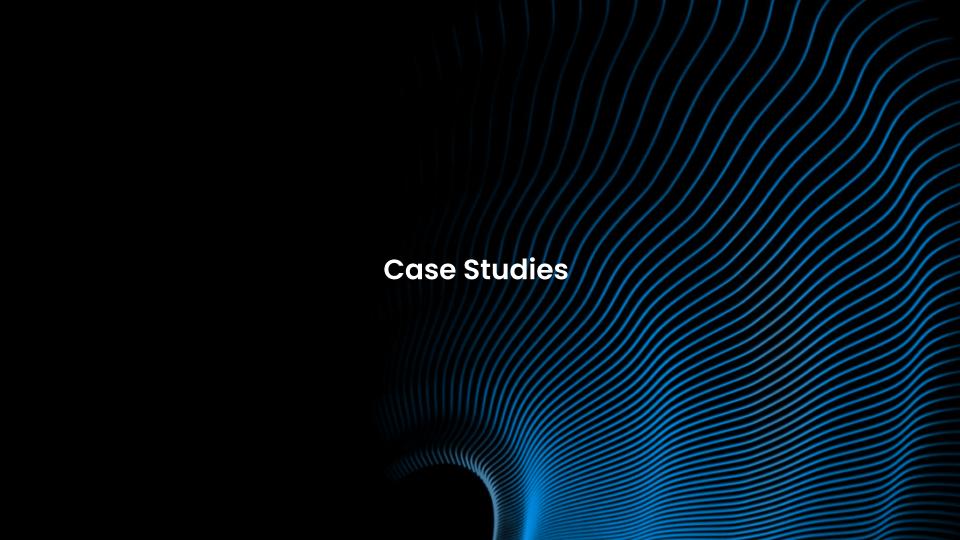
Arrows show the flow of data through the stack

- - - - ► Contextual data provided by app developers to condition LLM outputs

Prompts and few-shot examples that are sent to the LLM

Queries submitted by users

Output returned to users



One Of The Largest And Most Influential Multinational Consumer Goods Corporation

Built a Generative AI module using AIF 360 to produce unbiased market intelligence.

Enhanced Market Insight Cost F

Cost Reduction (Risk Mitigation

Outcomes

Richer Market Intelligence

 Used Generative AI to improve market intelligence by simulating scenarios, generating data, predicting preferences, and offering cross-cultural insights.

Cost-effective Research

 Streamlined market research by summarizing vast amounts of material swiftly, cutting down costs compared to traditional methods.

Risk Mitigation

 Al simulations mitigated market risks, lowering product failure chances and financial losses.

Challenges

- Generative AI outputs required verification with real-world data for accuracy and reliability.
- Avoiding biased datasets to lead to inaccurate market representations in Generative Al models.
- Balancing Generative AI with traditional methods in capturing human expertise.

Technical Spotlight

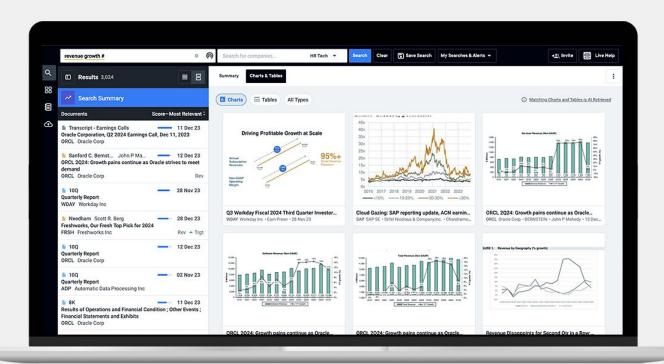
- Used Apache Spark to validate Al insights with verified data, enhancing reliability.
- Utilized IBM's AI Fairness 360 to identify and mitigate biases in Generative AI models.
- Deployed integrated platforms like H2O.ai, combining Generative AI with human-in-the-loop for comprehensive market analysis.

- Established protocols to validate
 Generative AI outputs with real-world
 data, boosting market intelligence
 reliability.
- Developed algorithms to detect and mitigate Al-generated bias for fair market representations.
- Integrated Generative AI with traditional research to leverage AI insights and human expertise.









A Global Logistics Company Providing International Express Mail Services

Transformed Logistics and Planning Through Gen Al Innovation.

Efficiency and Resilience

Real-time Insights

Improved Decision-making

Outcomes

Enhanced Resilience

 Generative AI identified disruptions, simulated scenarios, and enabled proactive risk mitigation, enhancing supply chain resilience.

Improved Performance

 Prioritizing alerts and optimizing decision-making drove efficiency and performance in supply chain operations.

Optimized Efficiency

 Using Generative AI for scenario analysis and optimization helped make informed decisions, cut costs, reduce waste, and enhance efficiency.

Challenges

- Bias in data or AI models can result in unfair recommendations and discriminatory practices.
- Ensuring effective collaboration between AI systems and human experts.
- Managing the complexity and scalability of global supply chains.

Technical Spotlight

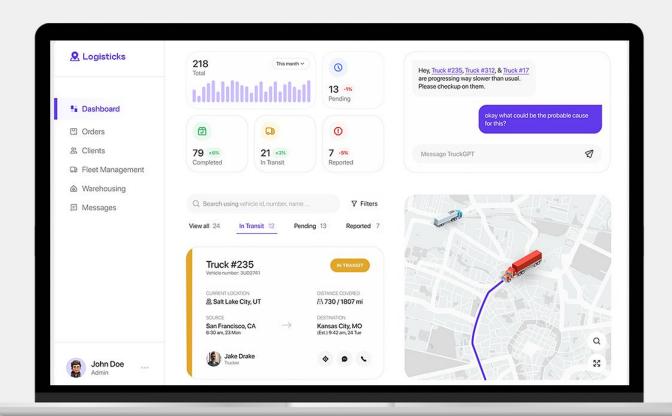
- Implemented BERT to improve supplier assessment accuracy and streamlined communication with supply chain stakeholders.
- Hyperledger secured supply chain data while blockchain ensured transparency and trustworthiness.
- Utilized AWS SageMaker to deploy and scale Generative AI models for supply chain simulation and optimization.

- Embedding fairness and impartiality in Al algorithms and decision-making processes mitigated bias and boosts transparency.
- Encouraged Al-human collaboration through training, feedback, and transparent communication.
- Implementing scalable AI infrastructure to handle the complexity and volume of supply chain data.









A Prominent British News And Media Conglomerate

Utilized Openmined to develop a cutting-edge generative AI module for advanced content creation

Time Efficiency Quality Enhancement Personalization

Outcomes

Greater Efficiency

 Used Generative AI tools to streamline content creation workflows, improving task management throughout production.

Improved Content Quality

 The integration of Generative Al supplemented human creativity, leading to higher-quality content output.

Audience-Centric Content

 Generative AI helped customize content for target audiences, aligning with trends for better engagement.

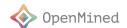
Challenges

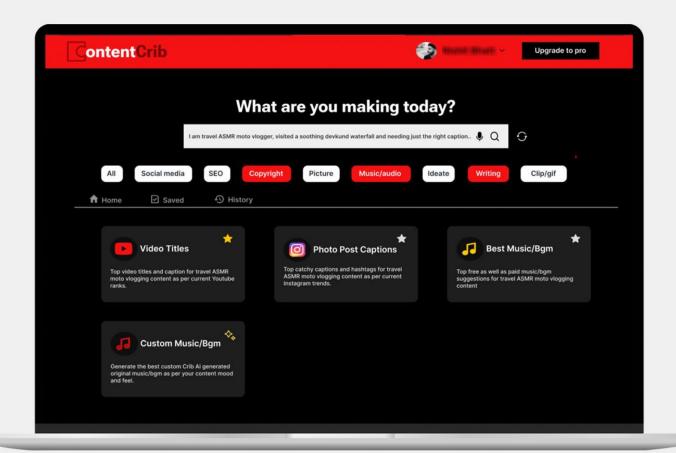
- Navigating copyright and attribution risks requires responsible usage to avoid legal issues.
- Al-generated content altering brand style and quality risks consumer trust.
- Al model accessibility raises privacy concerns, risking misuse and fake content dissemination.

Technical Spotlight

- OpenAl's CLIP provides legal compliance for Generative Al content creation.
- StyleGAN produces high-fidelity, high-res images for consistent brand aesthetics.
- OpenMined offered privacy-preserving Al frameworks to mitigate misuse and protect user privacy.

- Ensured legally acquired data for Generative AI training and proper content attribution to mitigate legal risks.
- Ensured stringent quality control and Al adherence to brand guidelines to maintain consistency.
- Implemented robust privacy controls to protect AI models and user privacy.





A Pioneer in Affordable Fashion with a Sustainable Edge

Developed virtual try-on technology with Azure Face to revolutionize the shopping experience.

Personalization Mitigating Return Rates Sales Conversion

Outcomes

Accurate Style Representation

• Generative AI rendered clothing and makeup products realistically on digital avatars, accurately depicting their real-life appearance.

Enhanced Exploration

• Virtual try-on technology allowed customers to experiment with various styles, clothing combinations, and accessories, expanding their exploration of product offerings.

Improved Customer Satisfaction & Sales

• By offering a simplified and personalized shopping experience, it reduced return rates, enhanced customer satisfaction, and ultimately drove sales growth.

Challenges

- Utilizing consumer photos and videos for virtual try-ons raises privacy issues.
- Consumers require transparency in virtual try-on app data usage.
- Biases in training data can affect rendering accuracy for certain demographics.

Technical Spotlight

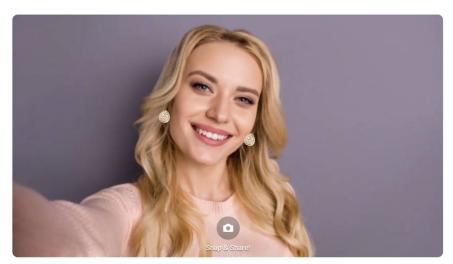
- Hyperledger ensured the security and privacy of consumer data.
- Leveraged blockchain technology to facilitate transparent tracking of consumer-machine interactions.
- Incorporated advanced facial recognition and skin tone analysis algorithms such as Microsoft Azure Face API.

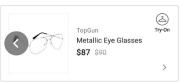
- Implementing robust data security measures to protect consumer information.
- Ensured clear data usage information and obtained explicit consent for media usage in virtual try-ons.
- Employed bias detection algorithms and diverse training datasets to minimize biases.





$\leftarrow \;\;$ Virtual Try On









Gold earrings with stones

\$87 \$90



₩ ADD TO CART

A Premier Private-Sector Bank in India

Crafted an elevated customer experience with our Al-Powered support module.

Real-Time Support Automation Customer Engagement

Outcomes

Enhanced Customer Engagement

 Generative AI fostered personalized, empathetic customer interactions, enhancing satisfaction and loyalty.

Efficient Resource Allocation

 Automating customer engagement freed up human agents to tackle complex issues, leading to faster responses and enhanced customer experience.

Scalability and Response Times

 Generative Al integration boosted customer interaction scalability, response times, and satisfaction by managing higher interaction volumes simultaneously.

Challenges

- Ensure accurate, personalized responses from AI virtual assistants for quality customer support.
- Set clear expectations about virtual assistant capabilities to maintain positive customer interactions.
- Safeguarding customer data and ensuring compliance with privacy regulations.

Technical Spotlight

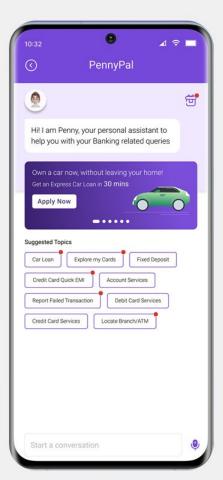
- Utilized TensorFlow for AI virtual assistants to improve conversational interactions.
- Leveraged BERT for transparent customer communication, ensuring virtual assistants convey capabilities and limitations clearly.
- Utilize AES encryption algorithms to secure customer data, ensuring its confidentiality during storage and transmission.

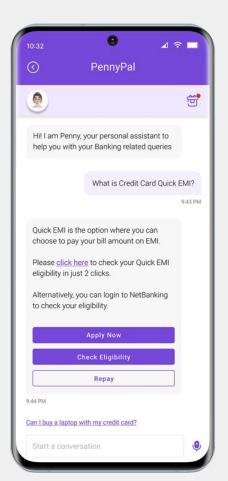
- Implemented continuous training and monitoring for reliable AI virtual assistants.
- Communicated virtual assistant capabilities clearly to foster transparency and trust.
- Utilized encryption and comply with GDPR/CCPA to protect customer data, boosting trust in the virtual assistant platform.

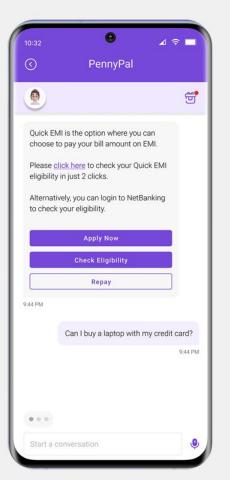












A Multinational Retail Corporation That Operates A Chain Of Hypermarkets

A personalized Tensorflow-powered recommendation engine to revolutionize customer experience.

Generative AI Customer Experience Personalisation

Outcomes

Improved Sales Conversion

 Hyper-personalized recommendations increased conversion rates by precisely matching products with individual customer preferences.

Enhanced Customer Satisfaction

 Offering personalized recommendations boosts satisfaction and loyalty by improving the shopping experience.

Increased Revenue

 Effectively guiding customers to products of interest boosts revenue with increased purchases and higher order values.

Challenges

- The model may exhibit bias in recommendations based on the training data.
- Handling customer data raises privacy considerations.
- Ensuring fair and impartial recommendations, mitigating unintended biases.

Technical Spotlight

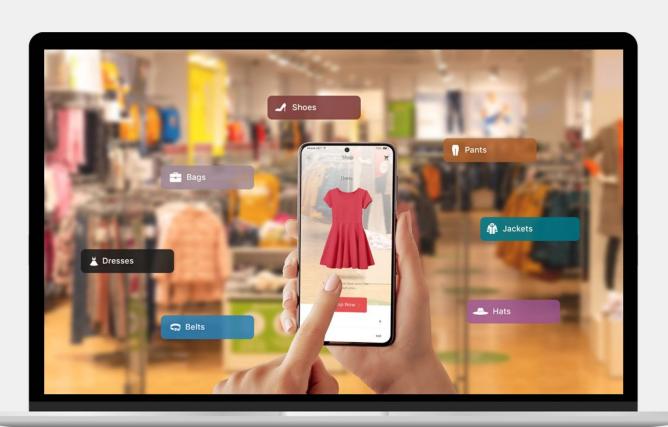
- IBM's AI Fairness 360 identified and corrected biases in recommendation models.
- Utilized HashiCorp Vault to ensure secure storage and access control.
- TensorFlow enabled natural language understanding for personalized recommendations, enhancing conversational interactions.

- Implemented ongoing monitoring, data updates, and human validation to identify and mitigate biases.
- Utilized federated learning or differential privacy to protect customer data.
- Regularly updating the model with fresh data enhances the accuracy, fairness, and effectiveness of recommendations.









A Leading Multinational Banking and Financial Services Corporation

Developed a virtual voice customer assistant to enhance customer experience.

Operational Efficiency

Customer Expectations

Knowledge Management

Outcomes

Cost Reduction

 Virtual voice assistants cut operational costs by automating routine inquiries, freeing up agents for complex cases.

Personalized Customer Support

 Integrating Generative AI with Conversational AI enhanced personalized customer interactions, boosting satisfaction.

Knowledge Enhancement

 Virtual Assistants with Generative Al streamlined knowledge management efficiently.

Challenges

- Ensuring AI model outputs are accurate and complete to avoid negative customer experiences.
- Balancing automation with empathetic, personalized support to maintain service standards.
- Deploying virtual assistants for consistent support across diverse regions and scenarios.

Technical Spotlight

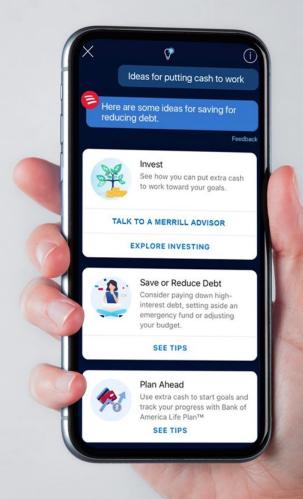
- Utilized TensorFlow Model Validation to verify the reliability and accuracy of Generative Al models.
- Implemented spaCy and VADER to enhance virtual assistants' language understanding and grasp of customer sentiments.
- Utilized Dialogflow CX for continuous improvement of virtual assistants through real-time customer interactions.

- Implemented human validation processes to verify AI responses and mitigate inaccuracies.
- Regularly monitored and trained of virtual assistants to maintain support quality and adapt to customer needs.
- Leveraged spaCy and VADER to ensure robust support across different languages and contexts.









A Leading Global Financial Institution

Built a custom Generative AI module to deliver instant business intelligence.

Data Accessibility

Time-efficient Insights

Risk Management

Outcomes

Lower Technical Hurdles

 Generative AI interface cut technical barriers, letting users access tailored results sans extensive programming, broadening business intelligence access.

Enhanced Data Accessibility

 Generative AI acted as an enabling interface, simplifying enterprise data querying and report generation for informed decision-making.

Increased Speed to Insight

 Generative AI analyzed diverse data sources swiftly, reducing insight generation time and providing real-time business intelligence access.

Challenges

- Balancing restricted access to sensitive business data with broader workforce data access.
- Avoiding the risk of inaccurate or false insights derived from Generative AI models influencing decision-making.
- Securing sensitive data and assessing model vulnerabilities to safeguard privacy in enterprise-wide data access.

Technical Spotlight

- Azure Active Directory enabled organizations to enforce strict access controls for sensitive business data.
- MLflow validated the reliability and accuracy of Generative AI models, ensuring trustworthy insights.
- Used Microsoft SEAL for homomorphic encryption or Sharemind for SMPC to ensure data privacy and security.

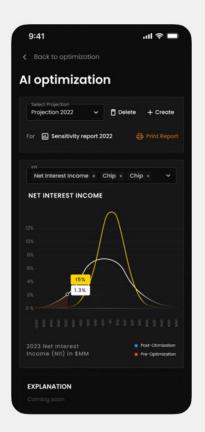
- Implemented robust access controls to restrict sensitive data access based on user roles and permissions.
- Rigorously validated and tested
 Generative AI models to ensure reliable and accurate insights.
- Used data anonymization and encryption techniques to secure sensitive data and mitigate privacy risks in enterprise-wide data access.

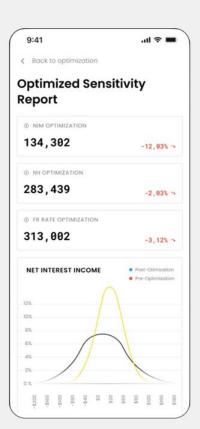


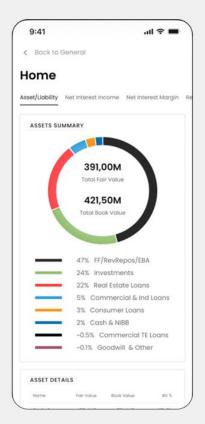












One Of The Largest Multinational Food And Beverage Company

Revolutionized promotion planning with our in-house Generative AI technology.

Predictive Analysis

Negotiation Support

Promotion Optimization

Outcomes

Efficient Negotiation Support

 Generative AI supported negotiations by sorting past campaigns and suggesting content, aiding employees with pre-works and pitch-decks.

Predictive Outcome Analysis

 Optimized shelf spacing and investment allocation through outcome prediction and scenario building.

Data-driven Promotion Optimization

 Quick analysis of Electronic Point of Sale (EPOS) data provided insights for optimizing promotional programs, including pricing and mechanics.

Challenges

- Ensuring security to prevent leakage of sensitive commercial data.
- Dated data for model training may underrepresent new target groups, impacting prediction accuracy.
- Avoiding outdated or incomplete data used to train the model.

Technical Spotlight

- Utilized Microsoft SEAL to encrypt sensitive commercial data consumed by the Generative AI model.
- Utilized IBM's AI Fairness 360 to address biases, ensuring equitable representation of all customer segments.
- TensorFlow Data Validation augmented training data and improved model accuracy.

- Implemented encryption and access controls to protect sensitive commercial data used by the model.
- Regularly updated training data to ensure fair representation of all customer segments and target groups.
- Augmented training data and validate quality to improve insights for diverse customer segments.









A Global Health Service Company

Transformed patient services with by building a Generative AI claims assistant to enhance automation.

Customer Experience Operational Efficiency

Personalization

Outcomes

Enhanced Customer Satisfaction

 Al-equipped live agents offered instant personalized feedback, enhancing customer experience during inquiries.

Increased Operational Efficiency

 Generative AI enhanced IVR systems for automated handling of simple inquiries, freeing live agents for complex issues, boosting efficiency.

Strategic Insights Generation

 Generative Al's text analysis revealed trends in customer queries, guiding strategic decisions for claims processing and customer support.

Challenges

- Geographic and socioeconomic bias in claim or plan details may lead to inaccurate responses for underrepresented customers.
- Ensuring Generative AI outputs are accurate, thus guaranteeing the reliability of the service.
- Promoting trust in AI-generated responses demands transparency and fairness, allaying concerns about impartiality.

Technical Spotlight

- Google's Fairness Indicators mitigated geographic and socioeconomic biases, ensuring equitable responses for all customers.
- TensorFlow Model Monitor ensured real-time monitoring of Generative AI models, enhancing response reliability.
- Used IBM Watson for Health fosters patient trust by providing transparent insights into healthcare Al decision-making.

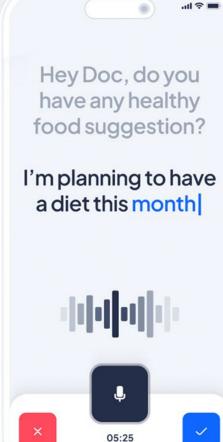
- Implemented fairness-aware algorithms mitigates biases, ensuring equitable responses for all customers.
- Regularly monitored Generative AI models to rectify inaccuracies, enhancing response reliability.
- Offered transparency and explanations for Al-generated responses fostered trust among patients.













A Multinational Technology Company Based In The United States

Leveraged GPT-3 to engineer a generative AI module for enhanced marketing content creation.

Personalization

Efficiency and Optimization

Regulatory Compliance

Outcomes

Improved Content Creation Efficiency

 Generative AI enabled faster and more consistent creation of product descriptions, imagery, video, and other marketing materials.

Enhanced Personalization

 By leveraging multimodal data, Generative Al facilitated the creation of personalized and contextually relevant content, driving higher customer satisfaction and loyalty.

Enhanced Compliance and Trust

 Generative Al assisted in maintaining consistency across different languages, regions, and cultural contexts, promoting regulatory compliance and building trust with customers.

Challenges

- Avoiding inaccuracies in marketing materials, potentially leading to decreased customer engagement and outcomes.
- Incomplete datasets may introduce biases, leading to unequal content quality tailored to various geographical or cultural factors.
- Ensuring the reliability and impartiality of generated content.

Technical Spotlight

- Leveraged GPT-3 for natural language generation, ensuring high-quality and coherent textual content.
- Integrated TensorFlow to analyze and create visually appealing imagery and videos.
- Implemented AI Fairness 360 to detect and mitigate biases in generated content, ensuring fairness and impartiality.

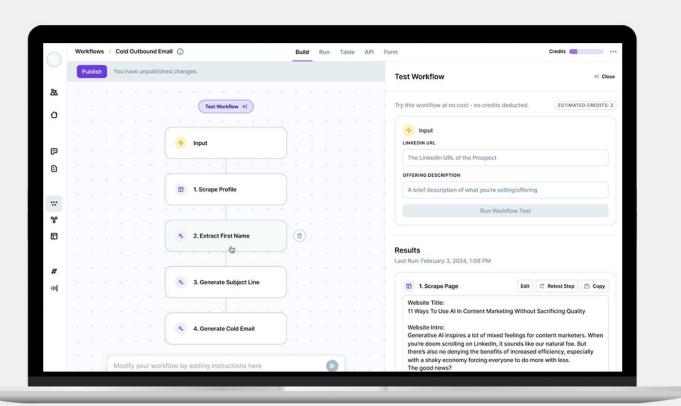
- Implemented robust quality assurance processes to validate the accuracy and relevance of generated content before publication.
- By incorporating diverse datasets and employing bias mitigation techniques, content generation ensured fairness and impartiality.
- Ensured transparency in Generative Al usage for content creation, educating stakeholders about capabilities and limitations to build trust.











A Global Law Firm With Extensive Reach And Diverse Expertise

Utilized AI/ML tools to develop a Gen AI module for streamlining document review.

Time Efficiency

Accuracy Improvement

Tool Enhancement

Outcomes

Efficient Document Retrieval

 Users efficiently retrieve relevant documents, saving time and effort in manual searches.

Accurate Question-Answering

 The system delivered accurate answers, improving information retrieval quality.

Document Summarization

 Users can summarize documents by selected topics for rapid comprehension and review.

Challenges

- Handling diverse document formats, including text, images, and tables, for information extraction.
- Ensuring the system understands questions and documents for accurate answers.
- Optimizing AI/ML models and frameworks for efficient processing of large data volumes.

Technical Spotlight

- Hugging Face Transformers helped document understanding and question-answering tasks.
- Utilized PyTorch and TensorFlow for scalable document processing model training and deployment.
- Used FAISS and ChromaDB for efficient document embedding retrieval, enhancing search capabilities.

- Used preprocessing to standardize document formats and handle complex structures for improved analysis.
- Utilized advanced semantic analysis and NLP to enhance document context and user query understanding.
- Fine-tuning Al/ML models with transfer learning and hyperparameter optimization boosted efficiency.

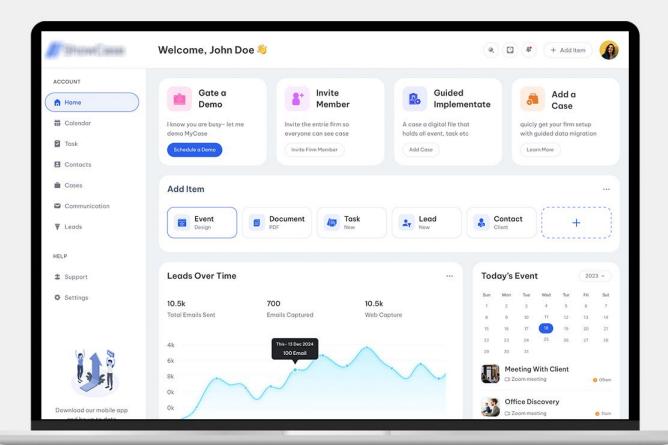












A SaaS Based ESG Risk & Due Diligence Software

Empowered stakeholders with advanced data analytics using LLMs for extraction, analysis, and NLP.

Data Integration and Processing

Custom ESG Score Computation

Transparency Promotion

Outcomes

Comprehensive ESG Insights

 Users gained access to a wealth of ESG data, including scores, asset details, and disclosure reports from various websites, enabling comprehensive analysis and assessment.

Informed Decision-Making

 Stakeholders usde ESG data for informed investment decisions, aligning with sustainability goals.

Enhanced Transparency

 The ESG Information Platform fostered trust and drives positive corporate sustainability changes with complete transparency.

Challenges

- Aggregating ESG data from various sources poses challenges in ensuring consistency and reliability.
- Creating custom algorithms for ESG scores demands expertise in data science and domain knowledge.
- Designed intuitive interfaces for complex ESG data poses usability challenges.

Technical Spotlight

- Used LLMs for data extraction, analysis, and natural language processing to derive insights from web-based ESG information.
- Built custom Generative AI models using TensorFlow or PyTorch for accurate ESG score calculation.
- Using AWS for scalable deployment ensured reliability and cost-effectiveness for the ESG Information Platform.

- Used advanced data integration techniques and tools to streamline aggregating and processing ESG data from multiple sources.
- Collaborated with experts to develop tailored ESG score algorithms meets stakeholder objectives.
- Conducted user research and testing to design intuitive interfaces prioritizes user needs.







My Dashboard

This dashboard be default shows the full range of data and interactive components the dashboard supports. Click to customize.

Edit Layout Revert to Default

Portfolio Management

This dashboard places an emphasis on aggregated performance data with the objective of highlighting ESG performance across your priority portfolios/watchlists.

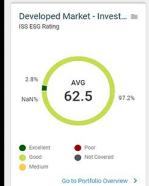
Click to customize.

Compliance

This dashboard places an emphasis on screens and policy profiles with the objective of highlighting compliance/non compliance across your priority portfolios/watchlists. Click to customize.

Research

This dashboard places an emphasis on issuer level data and and screens with the objective of highlighting ESG performance across your priority issuers.









A Cutting-Edge Supply Chain Management Platform

Developed a custom-built data analytics module using GPT-3 enhancing accountability.

Addressing Industry Malpractices

Improving Transparency

Facilitating Prompt Resolution

Outcomes

Prompt Grievance Resolution

 The Grievance Management System swiftly resolved grievances, minimizing negative impacts on communities and the environment.

Enhanced Transparency

 Stakeholders access transparent data on reported malpractices, fostered industry accountability and trust.

Improved Industry Oversight

 By analyzing malpractice reports, the system improved industry compliance with sustainability standards.

Challenges

- Analyzing diverse data sources, including text-based reports, demands advanced techniques.
- Ensuring the system can handle large volumes of grievances and data.
- Protecting sensitive data in malpractice reports while ensuring regulatory compliance and transparent analysis.

Technical Spotlight

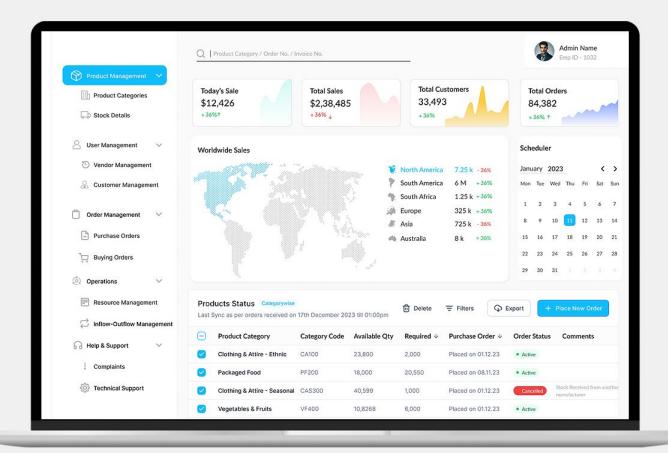
- Used GPT-3 for malpractice report analysis to yield nuanced insights and trend detection.
- Implemented Qdrant for efficient grievance data storage and retrieval, enabling fast user searches.
- Used AWS for scalable Grievance Management System deployment offers flexibility and cost-effectiveness in resource management.

- Used LLMs and Chat GPT for sophisticated analysis enabled accurate identification of issues in malpractice reports.
- Streamlined organization and retrieval of grievance data, optimizing system performance and scalability.
- Used AWS for scalable Grievance Management System deployment ensures reliability under high demand.









Leading Global Provider of Technical and Construction Services

Built a Virtual Field Assistant to transform field operations.

Generative Al

Information Challenges

Efficiency and Productivity

Outcomes

Enhanced Technical Knowledge Access

 Generative AI virtual field assistants offered engineers rapid access to extensive technical data, facilitating problem-solving and decision-making.

Efficient Troubleshooting and Diagnostics

 Engineers describe issues to virtual field assistants, which offered guided resolution steps, enhancing field efficiency.

Improved Safety and Risk Management

 Engineers ensured responsible decision-making by cross-verifying information and balancing virtual assistant outputs with their own judgment, reducing risks.

Challenges

- Ensuring Virtual assistants' accuracy.
- Avoiding over reliance on virtual assistants, risking their critical thinking and problem-solving skills.
- Avoiding incorrect information or advice from virtual assistants leading to accidents or operational failures.

Technical Spotlight

- Utilized BERT for virtual field assistants to understand and respond effectively to engineers.
- Used TensorFlow Model Monitoring to continuously track virtual assistants' performance and accuracy.
- Used explainable AI frameworks like SHAP for transparent virtual assistant outputs, enabling informed engineer decision-making.

- Implemented robust processes to ensure training data quality and accuracy for virtual field assistants.
- Encouraged engineers to balance virtual assistant output with their own judgment, especially in complex problem-solving.
- Established clear guidelines for handling virtual assistants' errors, ensuring accountability and mitigating liability.















Leading by Passion. Driven by Innovation

