The SUDO Series

Generative Al Use Cases



Generative Al Use Cases for Retail

INNOVATE. OPTIMIZE. LEAD

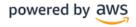














Task Automation

Key Benefits









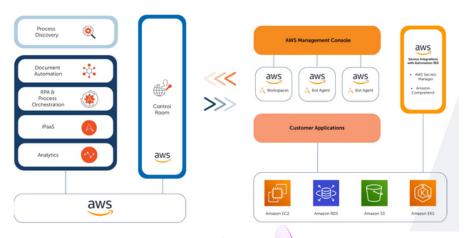


Solution

- 1.AI Integration: Embed AI by integrating with services like Amazon SageMaker for building and deploying machine learning models and Amazon Bedrock to access foundation models through an API.
- Document Automation: Provides fast and accurate intelligent document processing using Amazon Textract and Amazon Comprehend.
- 3. Contact Center Automation: Improves customer experience and agent productivity through integration with Amazon Connect and AWS Contact Center Intelligence.
- 4. Process Automation & Governance: Create end-to-end workflows to govern, track, and measure the performance of their automation programs.
- 5.AWS Workspaces Environment: Easy deployment and flexible scaling of automation within the AWS Workspaces environment.

How It Works

A user acquires the automation platform to create a Control Room in their desired region. Following this, a pool of Bot Agents is provisioned within the user's chosen VPC, which seamlessly integrates with the Control Room. These Bot Agents are then configured to connect with third-party applications to execute automation tasks.





Price Matching and Optimization

Key Benefits





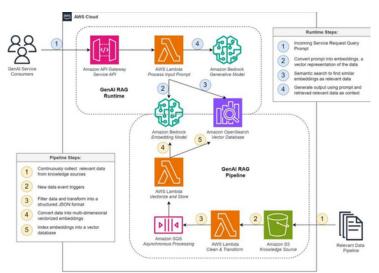


Solution

A generative AI solution that uses a **Retrieval-Augmented Generation (RAG)** architecture. The reference architecture shows a system built with **Amazon Bedrock** (for both generative and embedding models), **Amazon OpenSearch** (as a vector database), **AWS Lambda**, and **Amazon API Gateway**.

How It Works

The system analyzes dynamic data like market trends, competitor prices, customer data, weather, stock levels, and sales movement in real-time. A RAG pipeline continuously collects this data into a vector database. When a pricing request is made, the system searches the database for the most relevant, upto-the-minute information. This information is used to enhance the prompt, which is then sent to a Large Language Model (LLM) to generate an optimized price or create an "active" on-the-fly promotion.





Personal AI Stylist

Key Benefits





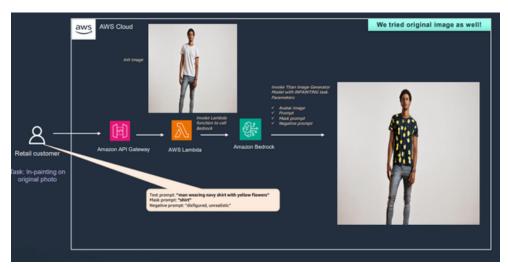


Solution

A generative AI solution on AWS that helps consumers make better sizing decisions. The reference architecture uses an Amazon Bedrock agent (powered by Claude 3) that accesses multiple Knowledge Bases (customer profile, product catalog, historical order details including returns). It also includes an architecture for generating a personalized AI avatar using Amazon Titan Image Generator.

How It Works

The system provides size recommendations and visualizations. When a customer views a product, the agent checks their profile, past order history (including returns for similar items), and customer reviews to see if the item runs large or small. It then provides a personalized recommendation (e.g., "We recommend Medium size based on past order history, returns and reviews."). Additionally, a customer can upload their photo to create a personalized AI avatar and then use in-painting to visualize how different clothes and sizes would look on them.





Gen Al Use Cases



Proactive Engagement with Hyper Personalization

Key Benefits: This approach transforms marketing by delivering more relevant content to individual users.

Solution: Integrating Generative AI into AWS Communication Developer Services (CDS).

How It Works: Al is used to create scalable, omnichannel marketing campaigns that are hyper-personalized based on user data and engagement history.



Conversational Al

Key Benefits: It is a powerful tool for enhancing customer interaction and satisfaction by understanding context and delivering relevant answers.

Solution: Integrating Gen AI with AWS CDS, for example, to create a two-way SMS chat with a Gen AI chatbot.

How It Works: This enables customers to have intelligent, open-ended dialogues through the same channels used for outbound marketing, with the Al providing personalized responses.



Get answers with a Wickr LLM bot.

Key Benefits: It provides answers from a LLM in a secure, end-to-end encrypted interface. When configured correctly, the bot has no "memory" and does not store questions or answers. It can also be connected to a custom LLM on private hardware for use in environments with intermittent internet

Solution: A Wickr Bot integration.

How It Works: Technical teams can build and deploy a Wickr Bot that brings Gen Al services to edge devices through a simple chatbot interface.



Image Recognition

Key Benefits: Allows users in the field to process photos and videos to receive alerts or metadata.

Solution: A Wickr Bot integrated with Amazon Rekognition.

How It Works: The bot is built to identify objects, scenes, actions, and more from images that are uploaded through the chat interface.



Transcribe speech.

Key Benefits: Allows users to receive text versions of audio messages automatically.

Solution: A Wickr Bot integrated with Amazon Transcribe.

How It Works: The bot automatically transcribes voice messages sent through Wickr and replies with the text.



Translate messages.

Key Benefits: Enables seamless multilingual communication within a secure environment

Solution: A multilingual Wickr Bot that uses Amazon Translate.

How It Works: The bot translates messages between different languages as they are sent in the chat

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