

Generative AI Conversational Bot Streamlines Customer Support for Sleep Solutions Brand

The Client

A leading Indian direct-to-consumer company, founded in 2016, manufactures and sells sleep and home furnishing products, including mattresses, beds, sofas, and home décor, through its own online portal and third-party marketplaces nationwide.



Business Challenges

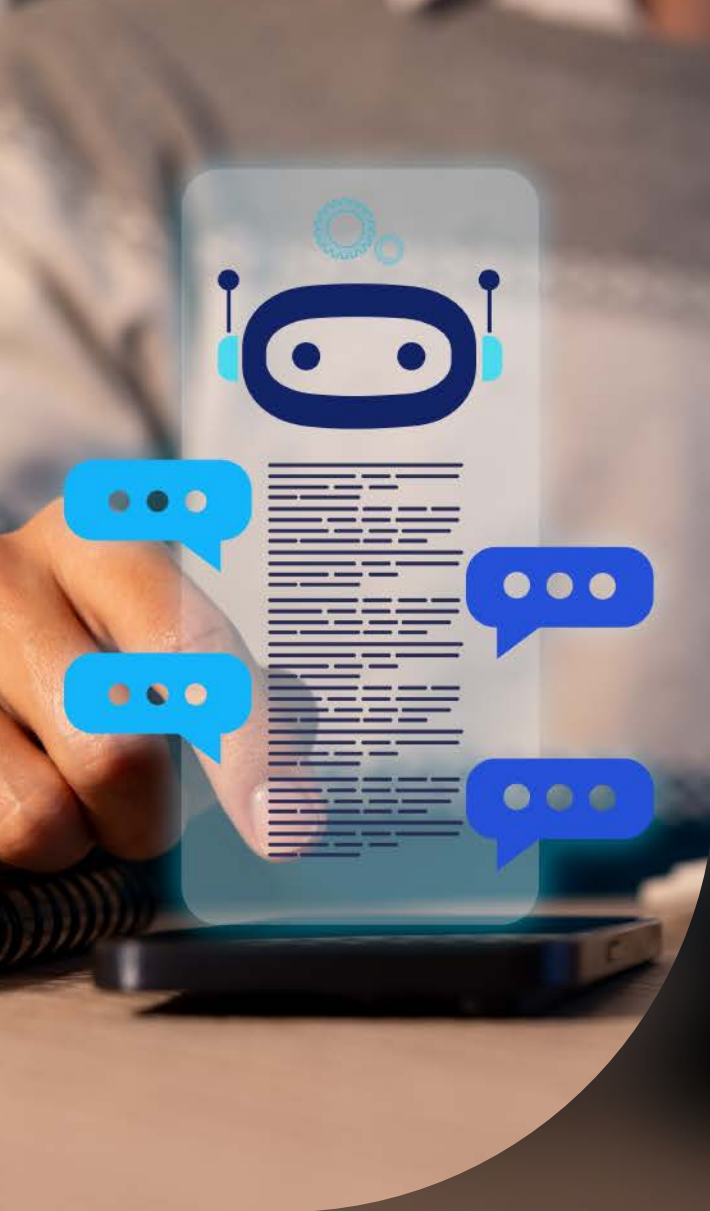
As the client scaled its product catalogue and customer base, rising volumes of repetitive queries placed mounting pressure on support operations and increased response delays further.

- High query volumes on warranty, delivery, and product specifications overwhelmed the support team
- Customers received delayed responses during off-hours, reducing satisfaction and increasing churn risk
- Agents spent excessive time on repetitive queries instead of complex escalations
- No conversational interface existed for real-time product discovery and query resolution

The Solution

MTSL designed and deployed a Conversational E-Commerce Bot powered by Generative AI, Retrieval-Augmented Generation, and query classification, enabling customers to discover products and resolve queries in real time.

- Customer queries are classified by intent using a model hosted on Amazon SageMaker
- Relevant information is retrieved from a vector database for grounded responses
- A Large Language Model on Amazon Bedrock generates precise, document-based answers
- The solution integrates with the client's e-commerce platform via Amazon API Gateway



Impact Delivered

The conversational bot achieved 60 to 70 percent accuracy during the proof-of-concept phase, meeting defined success criteria, with latency remaining within acceptable thresholds.

- Accuracy is expected to improve with expanded knowledge base content and fine-tuning
- The serverless architecture supported concurrent users without performance degradation
- Queries were classified into Warranty, Delivery, Product Info, and General FAQ categories
- Zero hallucination occurred, with all responses grounded strictly in provided documents
- Deployment remained cost-optimised within the proof-of-concept budget

Technology Stack

- Amazon SageMaker
- Amazon Bedrock
- Amazon API Gateway
- Vector Database
- Retrieval-Augmented Generation (RAG)
- Serverless Architecture (AWS)

Services Delivered

- Generative AI Solution Design
- Conversational Bot Development
- Cloud Architecture on AWS
- RAG Implementation
- Intent Classification Model Development
- Application Testing & Deployment

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