Synoptek

Gen AI Boosts Customer Service Metrics for IT Provider

Customer Overview

Customer

A leading Managed Service Provider

Profile

The client is a global provider of managed technology services dedicated to driving accelerated business outcomes through transformative solutions for mid-market enterprises.

Industry

IT Services

Services

Generative AI

Business Need

In the highly competitive fields of business development and client support, timely and effective responses to client inquiries are crucial. However, the managed services organization struggled to handle a growing volume of inquiries while maintaining a high standard of service. It also faced challenges evaluating call quality, agent performance, and service protocol adherence, significantly impacting client satisfaction and retention.

The client already had an established knowledge base containing standard procedures and a database of historical client interactions. The goal was to harness this valuable data to efficiently generate draft responses for inquiries, allowing for quick review, adjustments if necessary, and prompt delivery on a case-by-case basis.

To address this, the client sought to leverage Generative AI to build a system capable of generating personalized responses using the knowledge base. The system needed to seamlessly integrate with existing platforms to enhance the efficiency of handling inquiries and ensure timely, accurate responses within the required service level agreements (SLAs).

At the same time, it also sought an advanced QA call agent analysis system to enhance the efficiency and accuracy of call evaluations for client advisors and business development managers.

Solution and Approach

Synoptek proposed an automated AI-assisted support system that leverages Generative AI to generate contextually relevant responses, reduce manual workload, improve response times, and enhance overall communication quality and effectiveness.

Consulting Services

Synoptek provided consulting services to implement the Gen AI-powered support and call-analysis system. This involved understanding the client's specific needs, customizing AI models to suit the existing knowledge base, and ensuring seamless integration with existing platforms for a unified customer interaction environment

Implementation Services

Once the business needs and objectives were finalized, Synoptek implemented the GenAI solution:
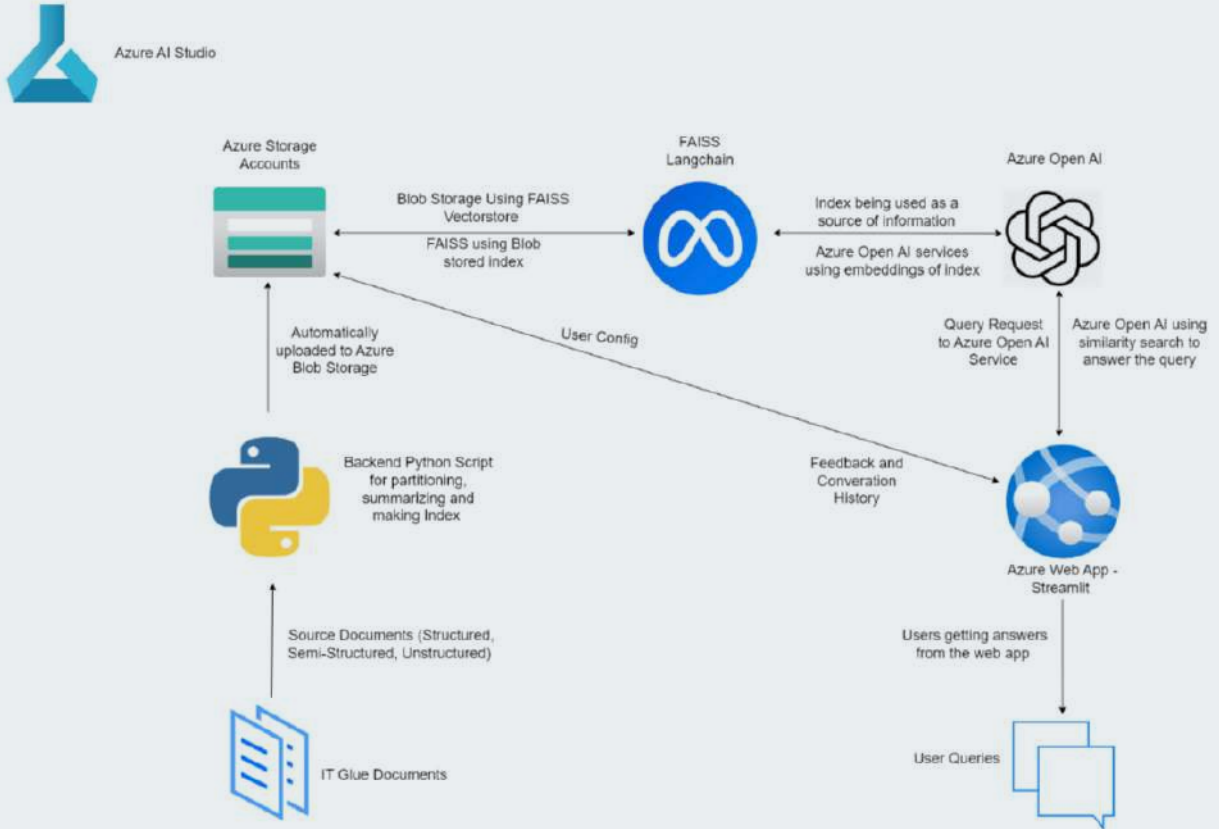
- **Knowledge Base Utilization for Draft Response Generation:** Leverage historical client interactions and standard procedures to efficiently generate draft responses for inquiries, enabling quick review and delivery.

- **Generative AI for Personalized Responses:** Utilize Generative AI to create tailored, accurate responses based on the knowledge base, ensuring efficient handling of client inquiries.

- **Seamless Integration with Existing Platforms:** Integrate the AI-driven system with current platforms to enhance inquiry management and ensure timely, accurate responses within established service level agreements (SLAs).

- **AI-Powered Call Transcription and Analysis:** Automatically transcribe and analyze calls, providing detailed insights into agent performance and call quality.

- **Automated Call Performance Evaluation:** Evaluate call performance against predefined metrics, reducing manual workload and increasing consistency.

- **Detailed Scorecard Generation:** Generate scorecards that provide actionable feedback on agent performance, helping identify improvement areas.

We also enabled the required integration with the client's existing systems:

- **Database:** Azure Vector database

- **Language:** Python

- **Cloud Services**
    - Azure Cognitive Services
    - Azure Vector database
    - Azure ML Studio
    - Azure Open AI
    - Azure App
    - Azure Blob Storage
- **Frameworks and Libraries:** LangChain, Multimodal-RAG, NLP

The solution used Azure Cognitive Services for language understanding and Azure Open AI for generating responses.

Process Flow Diagram

Azure AI Studio

Azure Storage Accounts — Blob Storage Using FAISS Vectorstore / FAISS using Blob stored index — FAISS Langchain — Index being used as a source of information / Azure Open AI services using embeddings of index — Azure Open AI

Automatically uploaded to Azure Blob Storage

User Config

Query Request to Azure Open AI Service

Azure Open AI using similarity search to answer the query

Backend Python Script for partitioning, summarizing and making Index

Feedback and Converation History

Azure Web App - Streamlit

Source Documents (Structured, Semi-Structured, Unstructured)

Users getting answers from the web app

IT Glue Documents

User Queries

Business Benefits

The automated system developed by Synoptek allows users to save significant time per client inquiry, aggregating substantial daily time savings. In addition, the organization enjoyed several other business benefits:

- Reduced manual effort and errors in call evaluations, improving overall operational efficiency.

- Improved operational efficiency and streamlined support processes, significantly reducing manual workload.

- Enhanced the quality and effectiveness of client interactions through tailored and relevant responses.

- Provided a centralized hub for managing client queries, feedback, and interactions, ensuring seamless integration.

- Freed up valuable time for QA teams to focus on high-priority tasks and complex evaluations.

- Enabled data-driven insights into client preferences, behaviors, and trends through improved tracking and analysis.

- Reduced response time by an average of 25 seconds per inquiry compared to manual handling, with a maximum reduction of 154 seconds.

- Achieved a ~75% success rate even with limited documentation, demonstrating the system's effectiveness in managing client inquiries.

- Reduced the average number of prompts needed per inquiry to ~1.3, highlighting the system's ability to provide concise and effective responses.

- Enabled consistent and objective performance feedback, enhancing the quality of agent assessments.

- Tailored and detailed scorecards provide actionable insights for agent improvement.

Response time reduced by 25 seconds per inquiry

75% success rate in managing client inquiries

Reduced the number of prompts needed per inquiry to 1.3

About Synoptek

Synoptek delivers accelerated business results through advisory-led, transformative full-life-cycle systems integration and managed services. We partner with organizations worldwide to help them navigate the ever-changing business and technology landscape, build solid foundations for their business, and achieve their business goals.

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