

CASESTUDY

## **Agentic AI Powered Chatbot for Unified Card Benefit Presentation**

for a Global Payment Provider



## Overview

The client needed a conversational RAG-powered AI chatbot to unify cardholder benefits from multiple issuers into a real-time, consumer-friendly interface for web and mobile. Challenges included fragmented platforms, limited real-time visibility, insufficient guidance, and missed opportunities for issuers and networks.

Tech Mahindra solved this with an Agentic AI using LangGraph, integrating data from various sources, creating a centralized vectorized repository, and offering a seamless chatbot UI for easy user interaction.

## Client Background and Challenges

The client is a global leader in multinational payment card services, operating across an extensive network of issuers, merchants, and consumers. Its R&D division focuses on developing AI-powered digital products to enhance cardholder experience and drive seamless commerce.

With card benefits and offers distributed across multiple issuer platforms and web properties, the client sought to unify the cardholder experience through an intelligent, conversational AI interface.

The initiative aimed to consolidate fragmented benefit information into a single real-time access point across mobile and web channels, leveraging Databricks on Azure, GPT-4.1, and an Agentic RAG framework to serve millions of cardholders globally.

### Challenges:

- **Fragmented Benefit Systems:** Consumer benefits are scattered across multiple issuer platforms, making it difficult for cardholders to discover and access all applicable benefits in one place.
- **No Real-Time Benefit Visibility:** Lack of integration across platforms limits consumers' real-time visibility into which benefits are currently active, available, or expiring.
- **Absence of Intuitive Usage Guidance:** No clear or contextual guidance exists on how, when, and where to redeem benefits, leading to confusion and underutilization.
- **Declining Consumer Engagement:** Fragmentation and poor discoverability result in lower benefit utilization, reduced customer satisfaction, and declining cardholder engagement.
- **Missed Revenue Opportunities:** Both the network and issuers miss opportunities to drive incremental spending, cross-selling, and deeper value realization from their card programs.



## Our Approach and Solution

Tech Mahindra implemented an agentic AI-powered chatbot using a Retrieval-Augmented Generation (RAG) architecture powered by Databricks, LangGraph, GPT models, and vector databases. The solution helped centralize benefit data, enabled real-time eligibility checks, and delivered personalized conversational interactions.

## Business and Community Impact

- Unified access to over 16+ data sources
- Personalized benefit discovery in real-time
- Improved customer satisfaction and brand affinity
- Scalable architecture supporting millions of cardholders

## About **Tech Mahindra**

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