GenAI Hackathon - Topic

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## Document Control

### 1.1 Document History

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| Modified By | Modified On | Comments/Notes | Version |
| Shalini Hariharan | 02/16/2025 | Final version | 1.0 |

### 1.2 Review Panel

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| --- | --- |
| Name | Role |
| GenAI Organizing Team | Coordinators |

### 1.3 Approvals

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| Version | Approval Date | Approver Details |
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### 1.4 Supporting Documents

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| Document | Location | Owner |
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## Project Details

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| --- | --- |
| Project Title | AI Automate |
| Project Sponsor | InfoServices |
| Approval Body |  |
| Approved Budget |  |
| Project Lead |  |
| Team | Shalini Hariharan,Firdous Shaikh |

## Introduction

In the rapidly evolving automotive industry, customer experience plays a crucial role in brand loyalty and satisfaction. To enhance customer engagement and streamline support operations, we are developing an **AI-powered Conversational Assistant** designed specifically for an automobile company.

This intelligent assistant will act as a **virtual service advisor**, helping customers with a wide range of tasks, including:

* **Troubleshooting car-related issues** by providing solutions based on a knowledge base.
* **Answering customer queries** related to vehicle features, warranties, and maintenance schedules.
* **Booking service appointments** seamlessly by integrating with the company’s CRM and scheduling systems.
* **Locating the nearest dealerships** based on customer location and service availability.
* **Managing subscriptions**, allowing customers to explore and add new services such as adding bluecruise subscription and premium connectivity
* **Recommending products**, such as accessories or new vehicle models, based on customer preferences and purchase history.

Beyond customer interactions, the assistant also serves as a **productivity tool for agents** by integrating with **Slack**. It assists customer support teams by:

* Providing **customer summaries** to give agents quick insights into past interactions and preferences.
* Fetching relevant knowledge articles and service history to **accelerate case resolution**.
* Automating routine tasks to **reduce agent workload** and improve efficiency.

With seamless integration across **Salesforce, Data Cloud, and external data sources**, this AI-powered assistant aims to **deliver personalized, efficient, and intuitive customer experiences** while improving agent productivity.

## Description of the Problem

Customers in the automotive industry face delays in issue resolution, limited self-service options, and inefficiencies in booking service appointments or finding nearby dealers. Service agents struggle with fragmented data, repetitive tasks, and manual workflows, impacting productivity. The absence of an AI-driven support system leads to inconsistent customer experiences and high operational costs. An AI-powered Conversational Assistant is needed to provide real-time troubleshooting, automate agent tasks, and enhance customer engagement through personalized recommendations and seamless integrations.

## Solution Requirements

To address these challenges, we propose an AI-powered Conversational Assistant that enhances customer support and streamlines agent workflows. This assistant will provide real-time troubleshooting, self-service capabilities, and intelligent automation to improve customer experience and operational efficiency.

**Key features include:**

* **AI-driven troubleshooting** for car-related issues using a knowledge base.
* **Seamless appointment booking** and dealership locator integration.
* **Personalized product recommendations** based on customer preferences.
* **Subscription management** for extended warranties and services.
* **Slack integration for agents**, enabling quick customer summaries and task automation.

By integrating with Salesforce, Data Cloud, and external data sources, this solution will enhance customer engagement, reduce support wait times, and boost agent productivity while delivering a seamless and intelligent support experience.

## Solution Overview

We implemented the above solution using **Agentforce**, Salesforce’s **generative AI-powered framework** designed for intelligent customer interactions. By leveraging Agentforce, we created **AI-driven agents** capable of understanding and processing natural language instructions to provide seamless and context-aware support.

To enable the assistant to deliver accurate and dynamic responses, we:

* **Defined and configured agents** in Agentforce, providing clear, structured **natural language instructions** to guide their behavior and decision-making.
* **Designed and implemented Salesforce Flows** to retrieve and process relevant **CRM data**, ensuring the assistant can access up-to-date customer information, service history, and product details in real time.
* **Utilized Prompt Builder Templates** to dynamically **customize responses** based on user queries, leveraging **generative AI techniques** for a more natural and personalized conversational experience.
* **Integrated the Azure OpenAI GPT-4 model** as the core **AI engine**, enabling advanced **language understanding, contextual reasoning, and human-like interactions**.
* **Implemented vector search capabilities** to enhance **knowledge retrieval**, allowing the assistant to efficiently access and surface relevant documents, FAQs, and troubleshooting guides from various data sources.
* **Integrated Agentforce with Slack** to assist **customer service agents with their day-to-day tasks**, such as retrieving customer summaries, answering queries, and automating workflows. This integration significantly **boosts agent productivity** by reducing manual effort and providing instant access to relevant information.

By combining **Salesforce Agentforce, GPT-4, vector search, CRM integrations, and Slack automation**, we successfully built a **highly responsive and intelligent conversational assistant** capable of providing personalized recommendations, troubleshooting assistance, and seamless support for both customers and agents.

## Components

|  |  |  |
| --- | --- | --- |
| **Component/Layer** | **Tool** | **Remarks** |
| **Platform** | Salesforce CRM |  |
| Platform | Slack |  |
|  |  |  |

## Capabilities

### Already covered in the previous sections

## Architecture

A diagram of a diagram

AI-generated content may be incorrect.

## Deliverables

Source Code

Technical Documentation

## Conclusion

The implementation of the **Agentforce AI Assistant** has successfully transformed customer interactions by providing **intelligent, real-time support** through generative AI. By integrating with **Salesforce CRM, Einstein Data Library, and Data Cloud with RAG indexing**, the assistant efficiently retrieves knowledge articles and processes user queries with enhanced accuracy. The use of **Azure OpenAI GPT-4 and vector search** ensures **context-aware responses**, improving troubleshooting and personalized recommendations. Additionally, **Slack integration** empowers agents with automated workflows and quick access to customer insights, boosting productivity. This AI-driven solution not only enhances **customer experience** but also streamlines **agent efficiency**, driving operational excellence for the automobile company.