SMART ASSISTANT – AI-BASED CHATBOT

CLIENT PROFILE

The client is a global leader in delivering predictive analytics and business intelligence software to businesses looking to improve performance across sales, marketing and automated customer service.

BUSINESS CHALLENGE

The client was seeking to develop an AI-based Chatbot application for enabling intellectual client interaction while also offering a personalized, proactive and a smart digital assistant that understands the user and their environment. The client was aiming to build a Chatbot--an interactive software powered by artificial intelligence designed to simulate human conversation. A Chatbot would allow their business to deliver automated customer support, e-commerce guidance, content and interactive experiences through a messaging platform.

In other words, the client expected an intelligent and intuitive solution that could perform tasks such as:

- Ordering Takeaway from a restaurant allowing customers to order from a chatbot.
- Using the chat engine to order food specific to the user's taste or mood at a given point of time.
- Promoting a marketing campaign, where users can be asked questions related to their queries.
- Chatbot to answer customer services questions and provides help with different tasks.
- Chatbot to monitor employees or customer's satisfaction.
- A chatbot to allow users to book flights and receive relevant information when they are in the airport.

The above proposed applications can essentially allow unlimited flexibility in terms of the user satisfaction and apart from the smart assistant like applications, human agents get involved in the conversation if necessary.

SURETEK SOLUTION

At Suretek, we possess the expertise and vast experience in developing bots for various industries and have carved a niche for ourselves by excelling in software development. We delivered a high-end and quality-rich AI based chatbot for clients' business that can be adapted to a multitude of industry domains.

The deployed Chatbot leverages the new scope in customer engagement always ensuring real-time response to a multitude of personalized queries and solutions to customers.

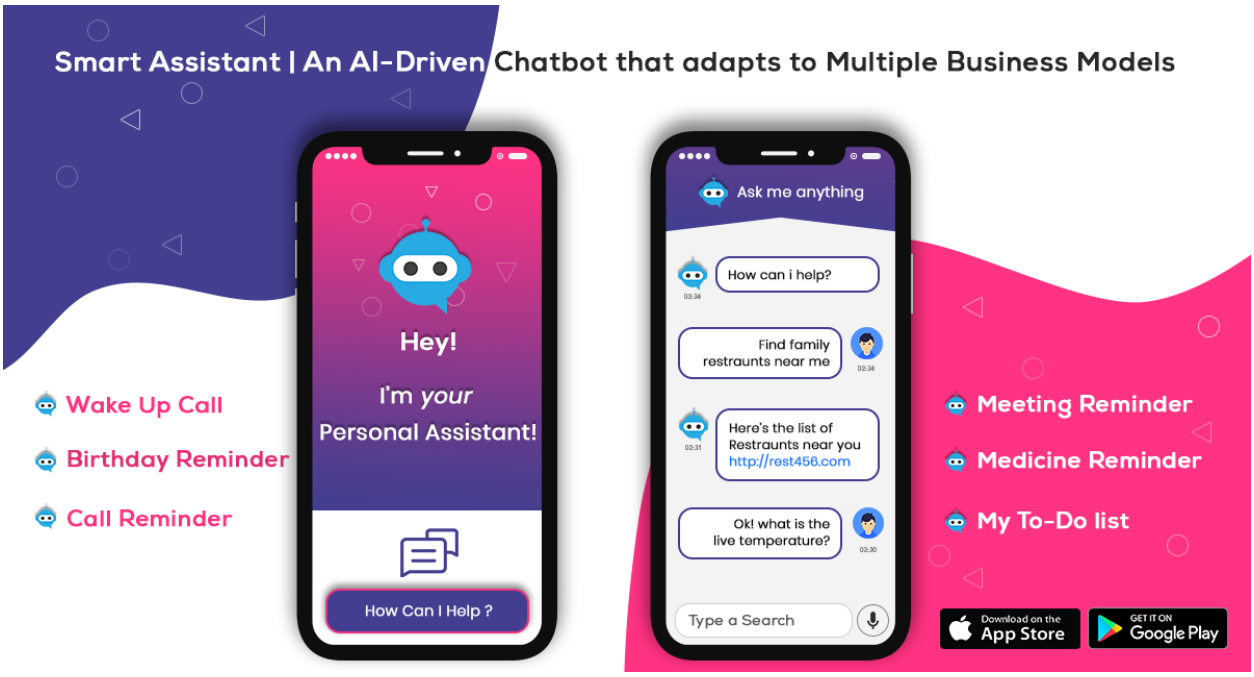
A Brief on Suretek's Contribution & Work Profile

- Implemented Smart AI based Chatbot made available as an Android and iOS application can further be integrated or scaled up with google calendar, GitHub, waffle, Jenkins, Trello, and so on to boost the user's productivity 0by providing relevant data in real-time.
- Employed the ability to hold relevant conversations where users can converse with Chatbot about any topic.
- We developed a deep neural network-based approach to provide the best response to each user input. For any given user input, the AI based solution would retrieve the best response from a spontaneous conversational database.
- Developed use cases and sample conversation flows for smooth flow of conversations between the user and the bot.
- Set up multiple NLP (Natural language Understanding) APIs to enable personalization of the conversation.
- Used LUIS.AI to build web-based smart Chatbot application to deliver natural and rich conversational experiences to a broad array of users.
- Made the application available to a wider audience where thousands of users engaged with the bot. This served us to find where the conversations were headed to and monitor if the tasks to be performed were failing. This was an attempt to gain real-time user feedback to improve the performance of the Smart Chatbot.
- Implemented A/B test scenarios to see which conversation paths proved to be more successful.
- Implemented the Chatbot to share relevant content in different formats—text, video, images, analytical reports & so on at fingertips.
- Implemented the ability to allow the Bot to freely interact with users' emails, maps, calendars, documents to provide seamless user assistance.
- Built the Bot on the concepts of:

  1. Entities: Entities represent concepts that are often specific to a domain as a way of mapping NLP (Natural Language Processing) phrases to approved phrases that catch their meaning.

  2. Intents: Intents represents a mapping between what a user says or writes and what action should the software take.

  3. Actions: Actions correspond to the steps the Chatbot application will take when specific intents are triggered by user inputs.



TECHNOLOGIES USED:

- **Web Interface Solution:** LUIS.AI, SYNC Framework, C#
- **Android and iOS App:** Xamarin, Cross Platform Development Framework
- **Database:** SQL Server 2014