

APEX Online Business Chatbot System

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ABSTRACT

Chatbots can be described as software that can chat with people using artificial intelligence.

These software's are used to perform tasks such as quickly responding to users, informing them, helping to purchase products and providing better service to customers.

Chatbots, or conversational interfaces as they are also known, present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form.

How to cite this paper: Chirunth R | Prof. Ganeshan M "APEX Online Business Chatbot System" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-2, February 2022, pp.1370-1372, URL: www.ijtsrd.com/papers/ijtsrd49415.pdf



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1. INTRODUCTION

Chatbots are mainly used to provide customer support in Online business. Chatbots are very intelligent. You train them once and they will communicate with your target audience in their language. Chatbot applications streamline interactions between people and services, enhancing Customer's experience. An Online business Chatbot project is built using artificial algorithms that analyzes user's queries and understand user's message.

A chatbot allows a user to simply ask questions in the same manner that they would address a human. The most well known chatbots currently are voice chatbots: Alexa and Siri. However, chatbots are currently being adopted at a high rate on computer chat platforms.

A simple chatbot can be created by loading an FAQ (frequently asked questions) into chatbot software. The functionality of the chatbot can be improved by integrating it into the organization's enterprise software, allowing more personal questions to be answered, like "What is my balance?", or "What is the status of my order?"

2. LITERATURE SURVEY

Bots Acting Like Humans: Understanding and Preventing Harm

Authors: Florian Daniel, Cinzia Cappiello, Boualem Benatallah

A starting point to understand what kinds of harm may occur in practice are concrete examples of what we can call bot failures, that is, incidents where a bot reportedly caused damage to someone. The methodology we follow to derive a respective taxonomy is thus example-driven analysis. Interfaces (APIs) that enable developers to enact actions programmatically. If instead a platform does not want to host bots, it does not provide APIs; yet, bot developers may still fall back for example to client-side.

In order to prevent abuse (and harm), different strategies may be adopted. The easiest one is simply banning bots from a platform (as with WhatsApp). However, not all bots are there to cause harm and not all bots that cause harm do so intentionally. A second option is to require bots to explicitly declare that they are not human.

3. SYSTEM ANALYSIS

A chatbot is a computer program that's designed to simulate human conversation. Users communicate with these tools using a chat interface or via voice, just like they would converse with another person. Chatbots interpret the words given to them by a person and provide a pre-set answer.

A chatbot is merely a computer program that fundamentally simulates human conversations. It allows a form of interaction between a human and a machine the communication, which happens via messages or voice command. A chatbot is programmed to work independently from a human operator.

Perhaps the most important aspect of implementing a chatbot is selecting the right natural language processing (NLP) engine. If the user interacts with the bot through voice, for example, then the chatbot requires a speech recognition engine. Business owners also must decide whether they want structured or unstructured conversations. Chatbots built for structured conversations are highly scripted, which simplifies programming but restricts the kinds of things that the users can ask.

4. PROPOSED SYSTEM

Design Phase: Natural Language Understanding

Natural Language Understanding underpins the capabilities of the chatbot. Without entity detection and intent recognition, all efforts to understand the user come to naught.

Most chatbot architectures consist of four pillars, these are typically intents, entities, the dialog flow (State Machine), and scripts.

Automatic Speech Recognition (ASR)

AKA, Speech-To-Text Speech Recognition or Speech-To-Text (STT) is a conversion process of turning speech in audio into text.

The goal of ASR is to achieve speaker-independent large vocabulary speech recognition.

Where chatbots have the luxury of addressing a very narrow domain, the STT/ASR must be able to field a large vocabulary. Ensuring whatever is said, can be converted to text.

The chatbot might not be able to directly address the query or request. Which might fall outside the domain of the chatbot. But the ASR must at the very least present accurate text to the chatbot/NLU portion.

Speaker independence is a given. The ability exist to recognize specific speakers.

There is also a difference between speaker identification and verification.

This is only relevant if chatbots use the speaker's identity to generate user-specific responses.

It is problematic if there is a continuous stream of words, which do not necessarily contain breaks between words.

Hence, it is helpful to give the user a signal to start talking, and keep the utterance as short as possible.

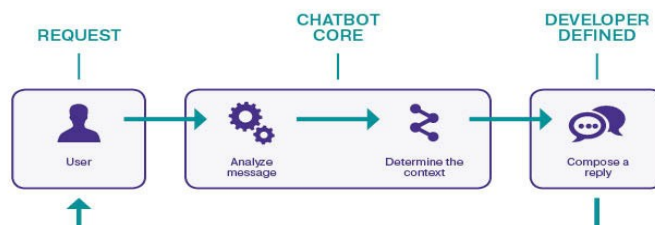


Fig 4.1 Chatbot working

5. CONCLUSION

To conclude, chatbots or smart assistants with artificial intelligence are dramatically changing businesses. There is a wide range of chatbot building platforms that are available for various enterprises, such as e-commerce, retail, banking, leisure, travel, healthcare, and so on.

Chatbots can reach out to a large audience on messaging apps and be more effective than humans are. They may develop into a capable information-gathering tool in the near future.

6. ACKNOWLEDGEMENT

I should convey my real tendency and obligation to Dr MNNachappa and Prof. Ganeshan M for undertaking facilitators for their effective steerage and consistent inspirations all through my assessment work. Their ideal bearing, absolute co-action and second discernment have made my work gainful.

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