

Chat bot using python

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Abstract

Sometimes the term "Chabot" is employed to ask virtual assistants generally or specifically accessed by online chat. Chat are basically the solutions for all the consumer frustration, regarding customer call assistance so we have companies like pizza hut, uber who have started Chabot to provide costumer services, apart from that speech recognition.

Keywords: virtual assistant, NLP, speech to text, artificial intelligence, chat bot

Introduction

Changes in technology have impacted human life in a variety of ways. Because of technology improvement, the way we lived in the past and how live now are vastly different. A virtual assistant, also called AI assistant or digital assistant, is an application program that understands natural language voice commands and completes tasks for the user. Spell checker keywords search, information extraction and NLP to process and translate one language to the other, looking up phone numbers, scheduling, placing phone calls and reminding the end user about appointments. Popular virtual assistants currently include Amazon Alexa, Apple's Siri, Google Assistant and Microsoft's Cortana -- the digital assistant built into Windows Phone 8.1 and Windows 10.

Google assistant

Google Assistant is Google's next generation way of searching with Google. Rather than providing links to websites, Google Assistant is designed to have conversations with you in order to complete tasks.

Siri

Siri is a built-in, voice-controlled personal assistant available for Apple users. The idea is that you talk to her as you would a friend and she aims to help you get things done, whether that be making a dinner reservation or sending a message.



Fig 1

Alexa

Alexa is a voice-controlled virtual assistant. She can play audio, control your smart home, answer questions and engage your favourite services to keep you organized, informed, safe, connected and entertained. As a product of Amazon, she's also your personal shopper.

Based in the cloud, Alexa is accessed through a growing number of smart speakers and other Alexa-enabled devices.



Fig 2

Microsoft's Cortana

It is a cloud-based personal assistant that operates outside the realm of standard voice-enabled AI. Cortana doesn't just understand voice commands and carry out tasks but is integrated for use across Microsoft's 365 suite of products and all Windows 10 operating systems, version 2004 and later.



Fig 3

Artificial intelligence

It is a Branch of computer science that deals to learn to things from user and to store all information about behaviour and relations of user

Speech to text

Machine translation is another important application of NLP

Natural language processing

Natural Language Programming is a part of computer science and artificial intelligence which deals with human languages. NLP is a component of text mining which is

basically helps a machine a reading the text. Obviously-machine do not know English or French, they interpret data in the form of zeroes and ones.

Chat bot

A chat bot is an artificial intelligence that simulates a conversation with a user through apps or messaging.

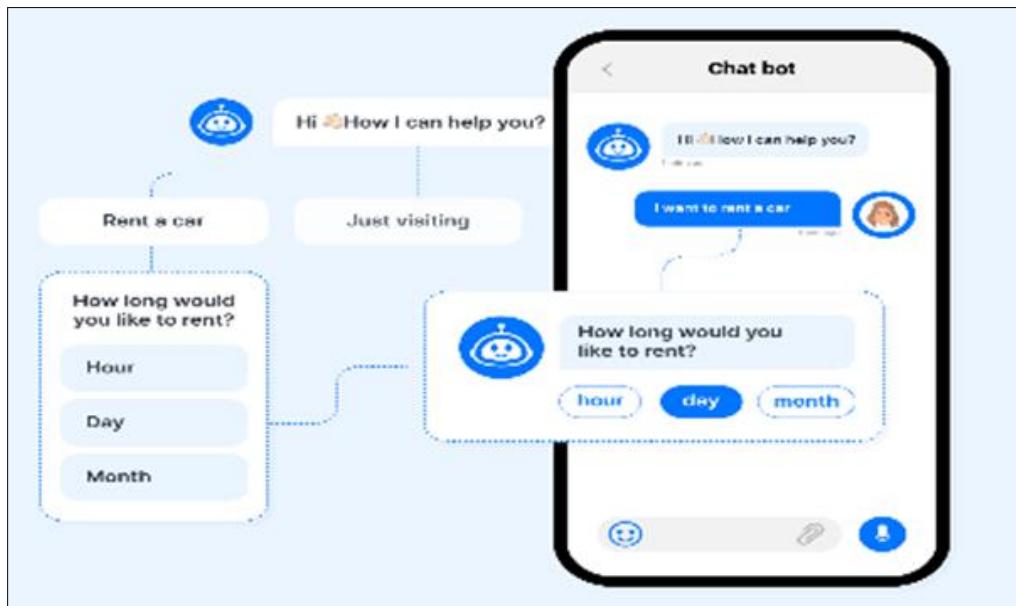


Fig 4

Chatbots are the future of AI, as they provide the closest to a natural conversation between human and machine. Chatbots are not new to us the first chat was Eliza, but it was not as complex as the chat bots we have nowadays, such as Siri or Alexa.

Due to the new machine learning and AI techniques chatbots are expected to complete 85% of our tasks in the future, but there is still long to go.

Review of literature

Speech recognition has several waves of major innovations. Speech recognition for dictation of voice, search, and voice commands has become a standard feature on smartphones and various other devices. To this aim, a conversational assistant, capable of answering common questions, has been combined with a content discovery engine that is more suitable for finding the proper answers from a collection of heterogeneous sources

Scope

Indeed, one has to look at human interaction human provide in chat services. This is not an issue with virtual assistant because of the wide range of services it provides it is available 24*7.

Natural language processing (NLP) helps a lot in human involvement, hence making the chat bot more communicative.

Challenges

Virtual assistants defy a number of difficulties call them challenges or opposes that can be taken advantage of

1. Privacy: privacy is a major issue when the wake word was used to activate these speakers or virtual assistant.
2. Accuracy: the virtual assistant did not understand were we are saying. it could because of the way we speak or of our intonation

3. Lack of vernacular: speech recognition is the most critical component of a virtual assistant yet it lacks vernacular support.

Conclusion

The main aim of the project was to develop chat bot (virtual assistant) that will be used to identify answers related to user submit questions. To provide with sufficient information that is required by the user.

Tomorrow's virtual assistants will be built with more advanced cognitive computing technologies, which will allow a virtual assistant to understand and carry out multistep requests and perform more complex tasks, such as making a plane reservation.

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