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SAGE VIRTUAL ASSISTANT

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Abstract

Automatic assistance is the need during pandemics and so Intelligent assistance is the need of the hour in the quest for technologically ahead university. During this pandemic where infection may cause by touching anything we don't know, Sage virtual assistant will not only guide about sage university but will also help most of peoples to solve many queries.

Sage virtual assistant help that people's queries. Sage virtual assistance talks with students. students ask questions like about institute's, course, specialization, fees, placements, intakes, eligibility criteria, Hostel fees AC/NON-AC, Mess facilities, bus facilities sport facilities library facilities, lab facilities etc.

Key Words

Speech recognition, voice recognition, Human Talks, Smart devices.

Objective

The main object of SAGE Virtual Assistant' system was to help students and parents and peoples to get information about university and impaired people to get required/desired information by giving input in speech/text format.

Introduction

Various Virtual Assistants are currently available such as Google Now which is best for voice recognition, Cortana in which the commands are typed it does not depend on voice commands, Siri it runs on IOS. This paper discusses the implementation of the 'SAGE Virtual Assistant' aimed to help the normal human being and students and parents to access online facilities. The system uses speech or text to communicate with the user. Speech recognition uses to convert the speech/voice input into text format. Then given converted input is parsed by the system and tokens are generated using algorithms and built in APIs which generates desired output in speech or text format. In addition, though speech recognition systems have greatly improved in recent years, achievement is far from perfect, so dialogue model must be built to include mechanisms for recovery from speech recognition mistakes. Speech is the most basic and important form of communication for interaction with anyone. Thus, to interact with computers via speech, rather than using the general devices is what one looks for. This can be accomplished by developing a Speech Recognition Application which allows a computer and mobile to identify the words that a person speaks into a microphone and convert it into written text. As a result, it has the potential of being an important mode of interaction between human and computers. This has proved to be a very challenging task of the conversion. Communication among the human being is dominated by spoken language. Hence, it is natural for people to expect speech interfaces with computers which can speak and recognize speech in native language. Speech Recognition is the methodology through which the computer can identify words or syllables spoken by the person and convert that into text accordingly. Hence, this gives an interaction between human and computer. Here, accuracy plays the major role for developing and enhancing it. As a result, it has the potential of being an important mode of interaction between human and computers.

Literature survey

The object includes speech/text content that converted to voice output [1]. They envisioned that someday computers will recognize natural language and count on what we need, give desired output. However, speech recognition and machine getting to know the input format and based on the input it will serve desired output through in build packages and APIs. We agree with that as computer systems turn out to be smaller and greater ubiquitous [e.g., wearables and Internet of Things (IoT) [2]. This paper presents a usability of four Virtual assistant voice-based "Next-Generation of Virtual Personal Assistants (Microsoft Cortana, Apple Siri, Amazon Alexa and Google Home) ", Published in 2018, This paper gives us knowledge about the uses of the multi-modal dialogue systems which process two or more combined user input modes, such as speech, image and user interface in order to design. We moreover get broad idea about the multiple user specific interactions. This paper gives idea about the next generation of virtual personal assistant and modifications that can be made to interact with the assistants. [3] Sumit Kumar Sarda, "VPA: Virtual Personal Assistant" Published in 2017. This paper describes the approach to develop a personal assistant that reduces the utilization of input devices like keyboard and mouse on our Personal Computer. This paper gives idea about using personal assistant in our day-to-day life rather than using personal computers. [4] DMA (Dragon Mobile

Assistant) was released by Nuance conversation, iconic Swipe keyboard is released by the same company. It comes with the basic features so you can expect pretty standard functionality. This one contains something called Attentive Mode which allows it to be activated even when the screen is off and bolted. That makes Dragon Mobile one of the few that offer this activity. You can also choose between several voices and even name your assistant what you want. [5] Advance Personal Assistant: -Watson is a type of question answering computing system that IBM is able to apply advanced simple language processing, tiding reprocessing, cognition delegacy, automated reasoning, and machine learning technologies to the field of open domain answering the questions. The main difference between QA technology and document search is that document search undertakes a keyword query and results in a list of documents, ranked according to the relevance of the query (often based on popularity and page ranking), whereas, QA technology takes a question asked or raised in natural language, and tries to comprehend it in a deeper way, and gives a precise answer of the raised question. According to IBM, "more than hundred different technologies are used for

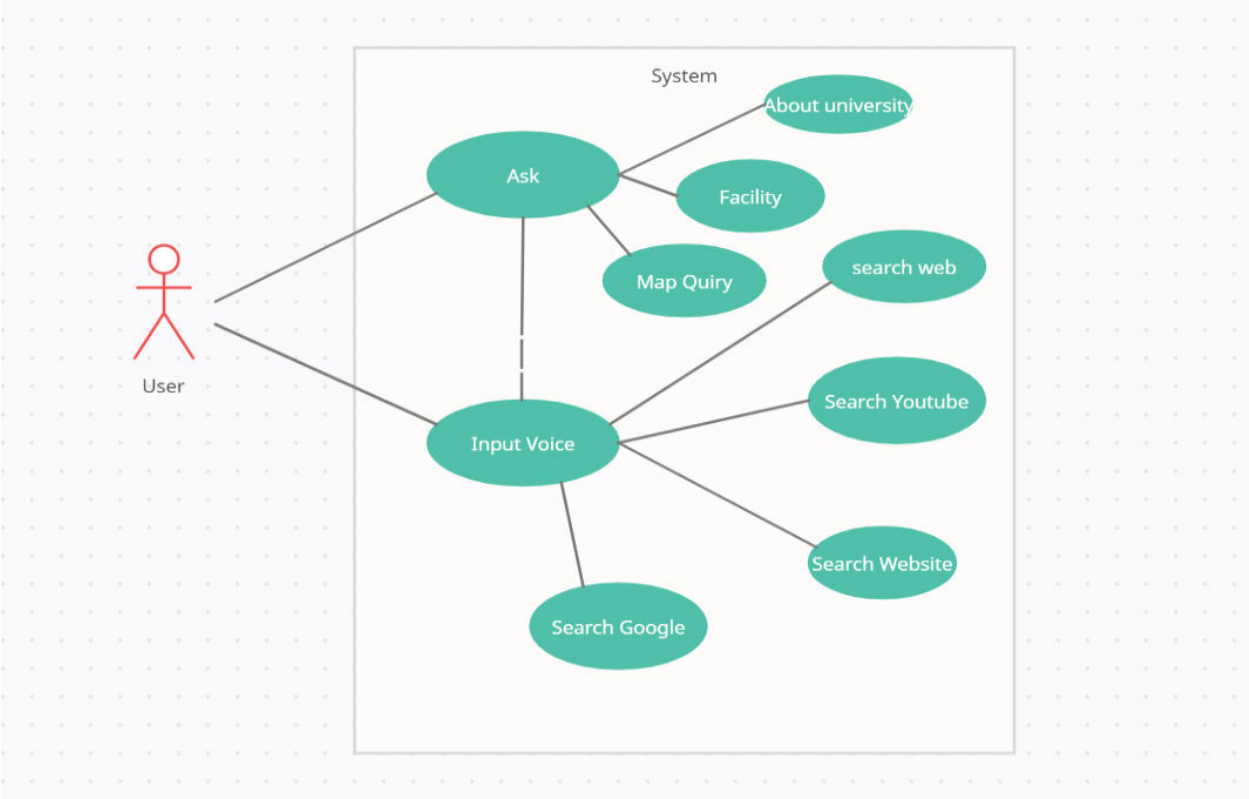
analyzing natural languages, identification of sources, finding and generating hypotheses, finding evidences, and many more."

Problem Statement

Applications such as Siri, Bixby, Ok Google and Cortana make mobile device users' daily routines that much easier. You may be asking yourself how these functions. Well, the **assistants** receive external data (such as movement, voice, light, GPS readings, visually defined marker

Proposed solution

An intelligent **virtual assistant** (IVA) or intelligent **personal assistant** (IPA) is a software agent ... The **result** was Speech to Text, speech recognition, text to speech.



Methodology

In this paper we have considered different methodology such as Speech to Text, speech recognition, text to speech, for e.g., sageuniversity.in is used to get information about anything like institute's, course, specialization, fees, placements, intakes, eligibility criteria, Hostel fees AC/NON-AC, Mess facilities, bus facilities sport facilities library facilities, lab facilities etc.

Technology/Tools

Python

Pycharm

Visual studio.

Conclusions

On the basis of literature survey and by analyzing existing systems, we have come to conclusion that the proposed SAGE Virtual Assistant' will not only be economical but will also boost the application domain of current systems available in the market.

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