

AI EOS using Wolfram Alpha

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Abstract: Artificial intelligence is crucial to day-to-day life. science of computers defines AI research as the study of intelligent agents. Today, most people, intentionally or not, have turned to some form of computerized information processing technology. Artificial Intelligence (AI) is already changing our lifestyle. A device that senses its surroundings and performs actions that maximize the likelihood of achieving a goal. The input to a database can be a choose to of users and articles, and the output is a ruthless recommendation. Input can be verbally or textually submitted by the user within the system. This paper presents a new approach to intelligent search. Overall, there are many people around the world who use assistants. This paper describes the provocation of applying virtual assistant technology. The paper also introduces the application of virtual assistants that can help open opportunities for humanity in various fields. Voice control is an important growing feature that will change people's lives. Voice assistants are available for laptops, desktops, and mobile phones. Assistant is now available on all electronic devices. A voice assistant is a software agent that can interpret human speech and respond in machine language

Keywords: Perception, Artificial Intelligence, Python, Wolfram Alpha

I. INTRODUCTION

A virtual software agent called an AI EOS is used to perform personal tasks and services. The technology that helps you for you on your fingertips. This is a new technology that is booming the technology market. Process user-based information. What do users want and what tasks do they want the wizard to perform? The software is fully virtualized and works virtually. Human effort is required for the user to execute commands by voice. This software focuses on virtual assistants and structural elements. In this software, I tried to understand the whole virtual environment and virtual assistant interface. Let's look at an example of a smart program or you could say out-of-the-box software that is available in English. For ease of use, the software is available in various languages, but is offered in English only. Some changes in the 'pyttsx3' language library make this software easier to use when developing applications. It can greet the user, ask the time, search the web browser, and open many files that exist on the computer.

While AI EOS excels at handling everyday tasks, its potential extends far beyond. Imagine AI EOS as your intelligent companion, capable of learning your preferences and adapting to your workflow. It could anticipate your needs, schedule appointments, manage your calendar, and even draft emails based on your voice instructions. Additionally, AI EOS could integrate seamlessly with smart home devices, allowing you to control lights, thermostats, and appliances with simple voice commands. This level of automation would free up valuable time and streamline your daily routine, making AI EOS an invaluable asset for a truly connected and productive line .

II. RELATED WORK

'Desktop Voice Assistant' Vishal Kumar Dhanraj,Lokesh Kriplani,Semal Mahajan(2022)

In this system, the main aim to make the system more convenient so that that user experience should be good. This project virtual assistant are task-oriented and the ability to understand and perform requests. In this virtual assistant the request are taken in written and voice as a command and this is done through the help a 'NLP' which is natural language processing that take the voice command and convert that command to text form so that system can figure-out the request and for speech recognition here Google's online speech recognition system is used for converting the speech-to-text it make easier for user that give options to give input to the system by speech or by text .Python are used as a backend that identifies the command given is context extraction ,API Call and system call . Then this response is

sent back to give required output. In python there most of the work is done by the libraries and that libraries that are used in this project are speech_recognition, playsound, gtts, os, datetime, pyjokes, wikipedia, json, web browser, selenium etc...

Virtual Personal Assistant Using Artificial Intelligence. Minakshi Garg, Kiran Bala, Sakshi Sharma(2022).

In this project an intelligence virtual assistant which perform tasks or services for users that gives command or input. In this system also speech-to-text is used to get the command from the user and it has MFCC that mean Mel-Frequency Cepstral Coefficient. It works on the collection of these coefficient. It add up to the transient power range of an sound. And that NLP also used .And then this system uses the web browsering for the extraction of the information of the input

Home Autoamtion Using Smart AI Assistant. G Sai Charan, Gaurav Suhag, G Karthik G Sai Sandeep.

As Artificial intelligence is taking over all the platforms and applications and making them more and more user friendly and intelligent and gives the application a human like behaviour. Voice command based ai assistant coded using python and NLP that can respond to user queries and respond to voice based command of the user. Using this Ai assistant user acan send emails ,to anyone just by speaking the reciever's name subject of email .User can also send whatsapp messages to any other and also to watch videos on you tube by just giving the commands by voice the system gives you the output as per the requirements. This part are mainly done by the web autoamtion that are be done by this system. functions like sending mail function, getting news updates function etc. The first stage was to add all these functions to our Assistant using different Python libraries, packages and APIs like text to speech conversion, Wikipedia library, News and Weather API and many more such functions. The second stage was to test all our functions for different user voice inputs that we did using Natural Language Processing library for python call NLTK We divided the voice input of the user into different sub strings and matched the main keyword to the function like if the user says "Play Shark Tank on YouTube", using NLP we extract the two keywords that are "YouTube" and "Shark Tank" and then we pass the keyword of what video we want to watch to our YouTube function.

Artificial Intelligence In Voice Assistant. Siddhesh Koli (2020)

Artificial Intelligence (AI) is one of the famous and broad branch of Computer Science in today's life. Artificial Intelligence are some of the smart machines which are able perform various human simulation activities by means of algorithm that test the data provided. The most used of AI in Voice Assistants will provide an enhanced user experience, generates new leads. User can do daily task such as telling time, whether report, traffic in area, paying bills Checking Emails, Paying bills, To-do list and so on. User can wake up device by just saying it's wake up word. The technologies that powers Voice assistants require plenty amount of data, which eeds artificial Intelligence platforms, including machine learning, natural language processing and speech recognition platforms. As end user interact with voice assistant, the AI program uses redefined algorithms to learn data from data inputs and becoming better and better after certain time with user interaction. According tos statista, there are total 4.2 Billion user worldwide which user digital voice assistant out of which Amazon had sold 4.1 Million Echo devices in year 2018 itself. There is great impact of Voice assistant in mainly Older Adult and children. According to research 26% of children uses voice assistant to do their studies or daily tasks. Voice assistants improve day by day with user experience. An AI in voice assistant update itself with human behaviour.

III. METHODOLOGY

1. Natural Language Processing (NLP):

Intent Recognition: Utilize an NLP library like spaCy or NLTK to train your model on recognizing user intents from spoken or typed commands. Train the model on a vast dataset of phrases and commands to understand user requests.

Entity Extraction: Identify relevant entities like locations, names, dates, or quantities within user commands. This information will be crucial for fulfilling user requests.

Dialogue Management: Implement a dialogue manager to track conversation history and context. This allows the assistant to understand follow-up questions or requests related to previous interactions.

2. Web Browsing:

Web Scraping: Utilize libraries like BeautifulSoup or Scrapy to parse and extract information from websites based on user queries.

Web Automation: Integrate a web automation library like Selenium to simulate user actions on web browsers. This allows the assistant to navigate websites and retrieve specific data.

3. System Automation:

Operating System Integration: Leverage platform-specific libraries or APIs to control system functions like opening applications, managing files, or controlling system settings based on user commands.

4. Wolfram Alpha Integration:

API Access: Use Wolfram Alpha's API to access its computational knowledge base. This allows the assistant to answer factual queries, perform calculations, or generate visualizations based on user requests.

Development Tools and Libraries:

- Programming Language: Python is a popular choice due to its extensive libraries and ease of use.
- NLP Libraries: spaCy, NLTK
- Web Scraping/Automation Libraries: BeautifulSoup, Scrapy, Selenium
- Speech Recognition: Google Speech-to-Text, SpeechRecognition
- Text-to-Speech (Optional): gTTS
- Wolfram Alpha API

Feedback

We have cover all the essential aspects of building an AI virtual assistant, including NLP, web browsing, system automation, and Wolfram Alpha integration. We haven't focus on user interface by integrating or we will implement it .After reading many journals we have conclude that advanced NLP Techniques have to explore like ml and dl will enhance the ability. Handling document could be much difficult as there are many structured, unstructured data has to be categories as there no trouble could occur.

IV. DISCUSSION

The purpose of this study is to comprehend user quality preferences and how they affect the acknowledgement of AI-based technologies. We find that the interaction quality is a significant factor when using VAS as an instance of an AI-based system. The develop better hypothesis is validated at the significance level of 0.05 as seen in Figure 2. Furthermore, at the level of significance of 0.05, the positive relationship among trust and innovative behaviour and use intent was confirmed, giving the model an explanatory power of 54.9%. It is also intriguing that, despite previous studies (Sahu A. K., Kumar A., & Gupta T., 2015); Chen and Chen (2009)) that supported the relationship among quality of information and system quality, it has not been conclusively proven to exist. Herzberg's motivational hygiene theory can explain this outcome of AI-based techniques (F. Torres-Cruz, A. K. Sahu, 2022). Given this theory and the significance of trust satisfaction as examined by Prerequisites and Johnson (1999), high-quality information and structures are necessary to prevent trust erosion. We think. These two elements should be at a level that is acceptable and consistent with customer expectation because they are hygiene factors.

V. CONCLUSION

This document explains how to use Python to develop your own AI EOS using wolfram alpha for Windows. People's lives are made easier by AI EOS using Wolfram alpha. With AI EOS you have the freedom to only use the services you require. We create virtual assistants for all Windows versions using Python, just like Alexa, Cortana, Siri, and Google Assistant. For this project, we make use of artificial intelligence technology. Using a digital personal assistant to manage or organise your schedule is a good idea. Additionally, virtual assistants are more portable, trustable, and

accessible than actual personal assistants. Our virtual assistant provides advice, gives directions, and gathers more information about you. You can count on this gadget to last. We investigated novel phenomena that might help to better understand this same adoption of AI-based innovations while studying the use of these technologies. We investigated novel phenomena that might help to better understand the implementation of AI-based technologies while studying the usage of these technologies. Our research revealed that the most crucial quality factor for fostering user trust-and consequently, users' intentions to use VAS is the calibre of interactions. We combined several theoretical stances in this study, including ISSM, SET, and HCI, and discovered that dialogue quality plays a significant role in embracing new technologies. The findings of this study will aid managers in creating better marketing and promotional strategies to create higher-quality products and services and draw in more customers.

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