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JARVIS: AI Voice Assistant

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Abstract: As we all know, Python is an emerging language, so writing a voice assistant in Python just got easier. The service provider's instructions can be customized according to the customer's needs. Literacy is the process of converting words into text. This is usually Alexa, Siri etc. Used with voice assistants. Python has an API called Speech Recognition that allows us to convert speech to text. Helping myself is an interesting job. It's much easier to do many other everyday tasks with a single voice command, such as sending an email without typing a word, searching Google and playing music without opening a browser, and opening your favorite IDE. In the current situation, technology allows them to do all the work with the same efficiency, or better than us, one might say. By doing this project, I realized that the idea of artificial intelligence in many areas is to reduce the number of workers and save time. The activities of this project are:

1. Can send e-mail.
2. Can read PDF.
3. Can send messages via WhatsApp.
4. Open Command Prompt, your favorite IDE, Notepad, etc. can open.
5. It can play music.
6. Wikipedia searches for you.
7. Google, YouTube, etc. in the web browser can be opened.
8. Weather forecast available.
9. Can transfer money.
10. May bring some random jokes.

Now an important question comes to mind, how did artificial intelligence come about? We created a virtual assistant, though not an artificial intelligence, like the creation of a sentence. But mainly, the purpose of artificial intelligence technology is to be able to do the same job for humans, or even more efficiently than humans. The truth is my virtual assistant is not a good example of artificial intelligence but AI.

Index Terms - Artificial Intelligence, desktop assistant, Python, text-to-speech, virtual assistant, speech recognition.

INTRODUCTION

[1] In our lifestyle, we like to experience many of the things we want to do from our computer, at the expense of our language commands, instead of using the keyboard and mouse to interact with the system. The structure of the system is especially beneficial in that the disabled group of is in routine work and the organization changes them for efficiency and competitiveness. However, as we tend to move into the age of multitasking in, it is necessary to quickly complete tasks and go to different voice commands to follow the process to help everyone well. Google CEO Sundar Pichai [3] says "We're now seeing another shift in computing, from mobile first to a world that prioritizes artificial intelligence." Also, in this new tradition, everyone can be safer without using the body. Interaction with office or machine where can communicate with many different people. The solution to all legal or product issues is to use voice assistant. The number of main functions supported by voice assistants are: Checking the weather Update - Known climate design visit is often a very common question. people do this, and with your voice assistant, you can get weather updates from anywhere by asking them to check the weather for you on, Email Sending and Viewing - In this online world, emailing and viewing is the most activity, we like to do at least once a day and if you are a migrant worker send paper activity is true AN [4,5] Summary 211 International Journal of Modern Trends in Science and Technology here [3,5] You send and receive a lot of emails. Now imagine if you could check your mail and avoid the return mail, instead of hacking you would say what the letter is and let your contact check you out. will save time, because we people can only share 40 words per minute {can we make} while can speak 150 words per minute. Search Wikipedia - Searching on Wikipedia is also an important part of our life and we want jobs with voice assistants. Streaming music and different apps are other important tasks we can do easily with our voice assistant. The world of turns to help sound victims. According to ComScore, by 2020, five percent of all searches will be voice searches. Voice calls will be widely used in the future, as knows the solution is to show and ask questions. is compatible with Google, 20 to 20% of phone queries are voice searches. 21% of voice search users on mobile say they use voice search as a result of because they dislike typing on mobile (Source: Statista 2015). According to Kleiner Perkins Caufield and Byers (KPCB) Web Trends, as of May 2016, one-fifth of AN Android apps () in the US were voice searched. [4]

I. LITERATURE SURVEY

There are some obvious improvements or innovations in the digital assistant discipline with the solid popularity of. This is mainly because of smart watches or sports bands, speakers, Bluetooth headphones, mobile phones, computers or desktop computers, TVs, etc. Maximum virtual device rectangular degrees, now support degrees rectangular back for audio assist, just use voice name to control device. The modern system of techniques is advancing, voice adorns the whole performance of computerization searches [2] with exponential growth in statistics is now called big statistics The only way to improve the quality of work of digital assistants is to help us. knows tools and teaches us to use tools regularly. Basic concepts such as Computer Science, Internet of Things, Big Data and Management. Machine Learning [1] is very hard and fast for pc science. This is one of the most useful enhancements at a time. We moved to before the AI showed up, we weren't involved in the update time to do anything, but now the tool itself can interact with the new mission and fixed the issue even if the wasn't powerful enough to include it. the people adopted. With Assistant voice [2,3] we can really set the work of, just voice the input of device, all work of will be done by, so your Speech will be converted to text. images, text remove important words from content and make queries to provide results to users. This is useful in everyday life. From mobile phones to PCs, to the machinery industry, the rectangular degree of these programs obviously requires automation of tasks and increases efficiency [3]

Important details: The IDE used in this project is PyCharm. All python files are created in PyCharm, and all necessary packages can be easily installed in this IDE. For this project pyttsx3, SpeechRecognition, Datetime, Wikipedia, Smtplib, pywhatkit, pyjokes, pyPDF2, pyautogui, PyQt, etc. models and libraries are used. I created a live GUI to chat with JARVIS as it provides a creative and fun way to chat.

A. PYCHARM

PyCharm is an IDE that includes many features such as research tools (matplotlib, numpy, scipy, etc.), support for the web (such as Django, web2py and Flask), Python refactoring, python debugger, code completion, waiting for code and project navigation. It also provides data science when used with Anaconda.

B. PYQT5 FOR LIVE GUI

PyQt5 is the most important python binding. It has a number of GUI widgets. PyQt5 has some important python modules like QtWidgets, QtCore, QtGui and QtDesigner.

C. PYTHON LIBRARIES

JARVIS uses the following python libraries:

- a) **Pyttts3:** This is a python library for converting text to speech.
- b) **SpeechRecognition:** It is a python module that converts speech to text.
- c) **Pywhakit:** It is a python library used to send WhatsApp messages at certain times with some additional features.
- d) **Date:** This library provides us with date and time
- e) **Wikipedia:** This is a python module for searching anything on Wikipedia.
- f) **Smtplib:** Simple Mail Transfer Protocol that allows us to send mail and send mail to mail.
- g) **Pyjokes:** It is a python library with many jokes.
- h) **Web browser:** This provides the user with an interface to present information on the web.
- i) **Pyautogui:** It is a python library for graphical user interfaces.
- j) **Os:** Represents work-related work.
- k) **Sys:** This allows the interpreter to run because it provides access to variables and functions that are usually associated with the interpreter.

I. PRESENT SYSTEM

We know of many existing voice assistants that use word processing and speech recognition concepts such as Alexa, Siri, Google Assistant, Cortana. They listen to the commands given by the user according to their needs and perform that task effectively and efficiently.

Because these voice assistants use intelligence, the results they provide are accurate and effective. These assistants can help reduce the effort and time people spend at work, eliminating the concept of typing and keeping track of other people we talk to and want a job with. These assistants are no less than assistants, but we can say that they are more efficient and effective in their work. Algorithms used to keep this group focused on the hard time and reduce the time.

However, in order to use these assistants, it is necessary to have an account (eg Google account for Google Assistant, Microsoft account for Cortana) and only be used with an internet connection, because the assistants will use the internet connection. They include various devices such as phones, laptops, and speakers.

II. PROBLEM STATEMENT

We all know about Cortana, Siri, Google Assistant and many other virtual assistants designed to help users of Windows, Android and iOS platforms succeed. But surprisingly, there isn't a complete virtual assistant for the Core Windows platform, which is made up of 70% of users. So unstable internet is a big problem for users who may have server issues and places where there is no internet access. The main purpose of creating self-help software (virtual assistant) is to use semantic information found on the web, users create content and provide information from information databases. The main purpose of Intelligent Virtual Assistant is to answer questions that the user may

have. This can be done in a business environment, for example a business website with an interactive interface. Intelligent virtual assistants on mobile platforms, your voice to the user "What can I do for you?" It includes call-to-action programs that it asks. and then respond to feedback. A virtual assistant can be a huge time saver.

III. PROPOSED SYSTEM

Helping ourselves is an interesting job. It's much easier to do many other everyday tasks with a single voice command, such as sending an email without typing a word, searching Google and playing music without opening a browser, and opening your favorite IDE. Jarvis differs from other voice assistants in that its desktop specific, users don't need to register to use it, and specifically no internet connection needed to get instructions.

The IDE used in this project is PyCharm. All python files are built in PyCharm, and all necessary packages can be easily installed in this IDE. For this project pytsx3, SpeechRecognition, Datetime, Wikipedia, Smtplib, pywhatkit, pyjokes, pywhatkit, pyautogui, PyQt, etc. We created a real-time GUI for interacting with JARVIS because it provides design and looks fun to talk to.

As it progresses, JARVIS can do any job with equal efficiency, or possibly better than we can. By doing this project, we realized that the idea of artificial intelligence in various jobs is to reduce the number of workers and save time. Features of this program include sending emails, reading PDFs, sending messages on WhatsApp, opening commands, your favorite IDE, Notepad, etc., opens Google, YouTube etc. in your web browser, provides weather forecast, notifications of your choice. He can make some simple conversations.

IV. SYSTEM DESIGN

1. DATA FLOW

The data flow for JARVIS is as follow:

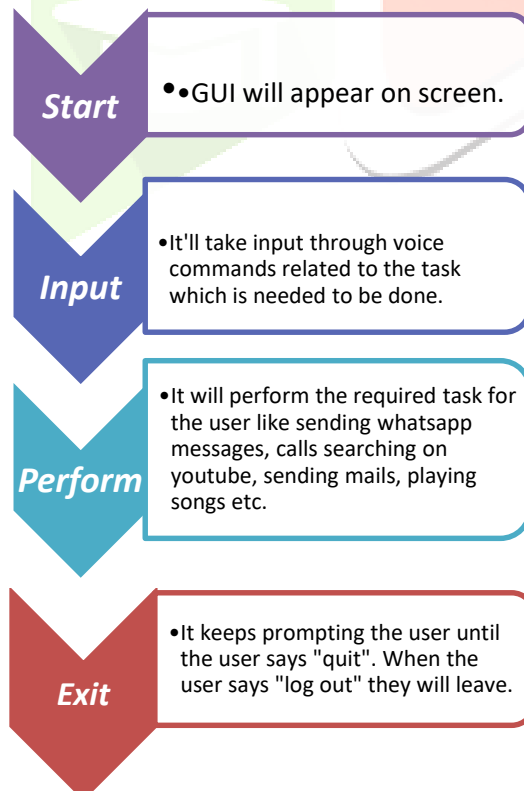


Fig.6.1. Data flow for JARVIS

The system is designed using the concept of artificial intelligence and with the help of appropriate Python packages. Python provides many libraries and packages to work with; for example, pywhatkit can be used to send WhatsApp messages.

The information in this article is for reference only, whatever the user says, the assistant will work accordingly. User input is not specific but is a list of activities that the user wants to do in human language (e.g., English).

VII. EXPERIMENTAL RESULT

We've tested our program with colorful inputs and go for the results. Following are some of the screenshots of the results:

```
: Listening...
: Recognizing...
: Your Command : get weather

: What City do you want to get the Weather update of?

: Listening...
: Recognizing...
: Your Command : Kolkata

: The current weather in kolkata is haze. The temperature is 36.0 degrees Celsius.
```

Fig.7.1. According to the user command output of weather forecasting

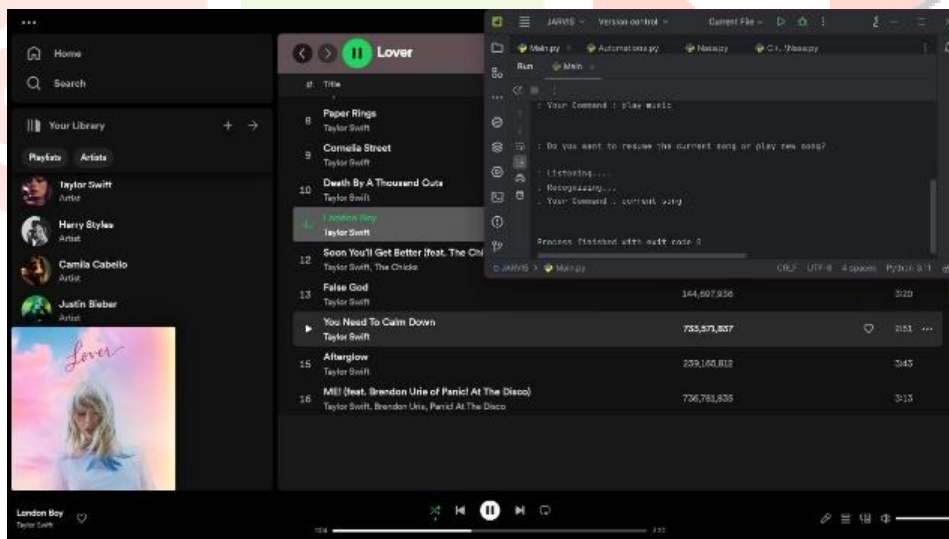


Fig.7.2. According to the user command output of playing songs.

VIII. RESULT DISCUSSION

As every field within the generated interface is speech-enabled, the made system has an equipped associate interface during which the stoner can choose the yield Program possibility and should begin constructing the programmer by voice. With the use of voice commands, the stoner may input programmer information using this interface. The database will be queried for the small print depending on the stoner's voice input and made available to the stoner. When the stoner presses the launch rendering button in the handed interface, the system automatically pulls information from the database and makes it available to the stoner.

IX. CONCLUSION

This paper "Jarvis – AI Voice Assistant" covers the planning, implementation, and use of digital services. The project is built using open-source software modules from the Python community. Continuous operation makes it efficient, flexible, and easy to add without interrupting existing operations and business. It works with voice chat and responds to user questions/issues or voice calls such as opening and running all user tasks. It uniquely greets the user and then interacts with the virtual assistant. The virtual assistant should remove all unnecessary work for the user. The whole process is based on the idea of words.

X. FUTURE WORK

Based on the findings, we propose to develop Android apps to meet the needs of customers. Users want to use Voice 216 International Modern Technology Trend Magazine Assistant to make their life easier, so help users.

1. Make JARVIS standalone and create a new by sharing the features below.
2. Also, a Build a JARVIS Android app.
3. Build more Jarvis audio terminals.
4. Most commands are encrypted to ensure security.

Virtual assistants available today are fast and responsive, but we still have a long way to go. The understanding and trust of the current system needs to be greatly improved. Today's helpers cannot be trusted in critical situations. The future of these assistants will see virtual assistants combined with artificial intelligence, including machine learning, neural networks and the Internet of Things. By combining these technologies, we will be able to reach new heights. What virtual assistants can achieve is beyond what we can currently achieve. Many of us have met Jarvis, the virtual assistant created by Iron Man who set a new standard for what we can achieve with virtual sound.

REFERENCES

- [1] Kei Hashimoto, Junichi Yamagishi, William Byrne, Simon King, Keiichi Tokuda, 'An analysis of machine translation and speech synthesis in speech-to-speech translation system' proceedings of 5108978-1-4577-0539-7/11/\$26.00 ©2011 IEEE.
- [2] Abhay Dekate, ChaitanyaKulkarni, RohanKilledar, 'Study of Voice Controlled Personal Assistant Device', International Journal of Computer Trends and Technology (IJCTT) – Volume 42 Number 1 – December 2016.
- [3] M. A. Jawale, A. B. Pawar, D. N. Kyatanavar, 'Smart Python Coding through Voice Recognition', International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-10, August 2019.
- [4] Nil Goksel-Canbek2 Mehmet Emin Mutlu, 'On the track of Artificial Intelligence: Learning with Intelligent Personal Assistant' International Journal of Human Sciences, 13(1), 592-601. Doi:10.14687/nights. v13i1.3549
- [5] Dhiraj Pratap Singh, Deepika Sherawat, Sonia, 'Voice-activated desktop assistant using Python', proceedings of High Technology Letters, ISSN: 1006-6748, 2020.

[6] Beirl, D., Rogers, Y., and Yuill, N. (2019). "Using voice assistant skills in family life." Computer Supported Collaborative Learning Conference, CSCL, Vol. 1, International Society of the Learning Sciences, Inc. 96–103.

