

# **INTERNATIONAL ISLAMIC UNIVERSITY CHITTAGONG**

## **Department of Computer Science and Engineering**

**Course Title : Artificial Intelligence Lab**

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# **CERTIFICATE**

This is to certify that the project entitled “Jarvis: A virtual assistant like iron man jarvis in python” is a bonafide work done by **Adnan Araf (C193018)**, **Niloy Sarkar Babu (C193035)**, **Mainuddin Hasan Manik(C181102)** of 6th Semester Bsc in Computer Science and Engineering from International Islamic University Chittagong.

Further, it is certify that the students were regular during the academic year 2021-22 and have worked under the guidance of concerned faculty until the submission of this mini project work at International Islamic University Chittagong.

## **ABSTRACT**

In this project, we'll create a voice assistant named Jarvis that can open files, conduct web searches, retrieve Wikipedia results, read PDF files, launch applications, and even make jokes and provide you advice. Artificial intelligence based Voice assistants are the working frameworks that can perceive human voice and answer through coordinated voices. The voice assistant will collect audio from the microphone, **convert it to text, and send it over GTTS** (Google text to speech). The English-language audio file created by the GTTS engine will be played using the play sound module of the Python programming language. We are importing libraries such as "os" for operating system tasks, **"speech recognition" for voice command analysis**, **"pytsx3" for voice command into text strings**, **"Time" for fetching the current time and date**, **"web browser" for web-based tasks on default web browsers**, and **"pyautogui" for Taking Screenshot**.

**Keywords**—pyjokes, pytsx3, pyautogui, speech recognition.

# **Introduction**

Voice assistants are devices/applications that utilize voice acknowledgment innovation, natural language processing and AI to answer people. The idea of virtual assistants in prior days is to depict the experts who offer subordinate types of assistance on the web. [1] The occupation of a voice is characterized in three phases: Speech to text; Text to Intention; Intention to action; This is the principal framework proposed to intelligently address clients in natural language.[2] It is enlivened by the character Jarvis, played by Edward Jarvis in the Marvel Studio Creations Iron Man, who served Tony Stark [Robert Downey Jr.] as his most clever speculative collaborator, loaning him help into each conceivable angle like technology, medical, social, and other cognizant educational planning viewpoints. Voice assistant will be completely evolved to work on the current range. Thanks to AI based voice assistants, we expect our every need to be met, and it makes a move.

# **Requirements**

1. For this we need a code editor (IDE) for write all python programs.  
Example – VS Code.
2. Python Interpreter of any version for Compilation of the code.
3. Stable Internet connection.
4. Microphone for input the voice command.

## **SCOPE**

Presently, Jarvis is being developed as an automation tool and virtual assistant. Among the Various roles played by Jarvis are:

1. Time Reporting
2. Taking Screenshot
3. Performing Google Search
4. Searching on Wikipedia
5. Listen to Jokes
6. to open YouTube site in browser
7. To play music
8. To open VS Code Program

## **Task accomplished by the voice**

- ☐ assistant Play a song or open YouTube. When client asked 'play music' it plays the music for the client. When the user says 'open YouTube' the assistant openYouTube for user.
- ☐ Can remember anything.The assistant queries"what should I remember" when the user says"Rememberthat." Further, it can reveal it memories.
- ☐ Search anything from Wikipedia. If the user says 'Wikipedia' the assistant searches the content askedby the user.
- ☐ Takes a screen capture of the display. When the userrequests "Screenshot", the assistant capturesthe display and stores it in the path given by the user.
- ☐ It provides accurate weather information. When a user requests 'weather', the assistant gives the accurate weather of the location requested by the user.
- ☐ It broadcasts live news around the world. When a user asks for 'headlines', the assistant reads the latestnews headlines from the website.
- ☐ It sends an e-mail [6] to the username indicated by the client. At the point when the client asks 'send email', the associate asks to whom the mail has to be send and it will send a mail as indicated by the client.

- ☐ Can able to up/down or quiet the volume by client order and so forth. Send WhatsApp messages to the phone number ordered by the user.
- ☐ Set Alarm. If the client asked for an "alarm", the assistant asked, "What time do you want to set the alarm?" and the alarm will ring at the time set by the client.

## **Methodology**

Programming languages are used to create voice assistants, which listen to the verbal orders and respond in accordance with the user's requirements. In this project, we developed an AI-based voice assistant using the Python programming language. The voice assistant will answer a user's request to "Play me a song" or "Open youtube.com" by playing that specific song or launching YouTube. The voice assistant waits for a pause to verify that the user has finished their request before sending it to its database to be looked up.

- ☐ The user's request is split into individual commands so that our voice assistant can comprehend it.
- ☐ Our request is looked up and contrasted with the other requests once it has been added to the commands list.
- ☐ Following that, the commands list relays these instructions to the voice assistant.
- ☐ The voice assistant knows what to do next after receiving those commands.
- ☐ If the request is not clear enough for the voice assistant to grasp it, it asks us to say that again.

- ☐ The voice assistant will carry out the request made by the user if it thinks it has understood it well enough to process it.

## **FUTURE SCOPE**

The virtual assistants which are currently available are fast and responsive but we still have to go a long way. The understanding and reliability of the current systems need to be improved a lot. The assistants available nowadays are still not reliable in critical scenarios. The future of these assistants will have the virtual assistants incorporated with Artificial Intelligence which includes Machine Learning, Neural Networks, etc. and IoT. With the incorporation of these technologies, we will be able to achieve new heights. What the virtual assistants can achieve is much beyond what we have achieved till now. Most of us have seen Jarvis, that is a virtual assistant developed by iron man which is although fictional but this has set new standards of what we can achieve using voice-activated virtual assistants.

## **CONCLUSION**

- ☐ Jarvis is a digital and virtual assistant with artificial Intelligence. Virtual Personal assistants are very effective way to organize you schedule. Now there are many smart personal digital assistant applications available in market for various device platforms.
- ☐ It is very flexible and useful technology.
- ☐ I provides a better interface to deal with it.



- ☐ They also have lot of information than any assistant as they are connected with internet