EasyChair Preprint

№ 4818

Jarvis AI using python

Korra Divya, Poppad Rahul and Ashish Raja

December 29, 2020

JARVIS AI USING PYTHON

K.DIVYA P.RAHUL ASHISH RAJA

Malla Reddy College of Engineering, Maisammaguda, Dhulapally, Hyderabad, Telangana-500100, India

Abstract: This is the New Jarvis AI Project it will do some functionality followed by user query. Actually you seen this project in one the Hollywood movie where one the person developed one system so he can save his a lot of time just by asking those things to system. So in this application Jarvis AI also do the same work like it's have some features so by asking "tell me your features" it's saws his all features so any new user can understands which services it can provide. This application can provide some information like time & date, weather, battery percentages and CPU usage to the user. Also this application can reminds important work, meetings or event by setting reminder etc.

Keywords: Artificial intelligence, CPU usage, setting reminder,

1. INTRODUCTION

We are all admirers of the Marvel series and especially Tony Stark's assistant J.A.R.V.I.S. The full form of J.A.R.V.I.S. i.e. "Just A Rather Very Intelligent System" is also very appropriate and fit for all he does for Tony. We have all dreamt of having one JARVIS for our whole lives. So, why not start by building one elementary JARVIS ourselves. Though the real JARVIS is built with AI technologies, here in this python project we will simply code it with some basic knowledge and skills of Python.

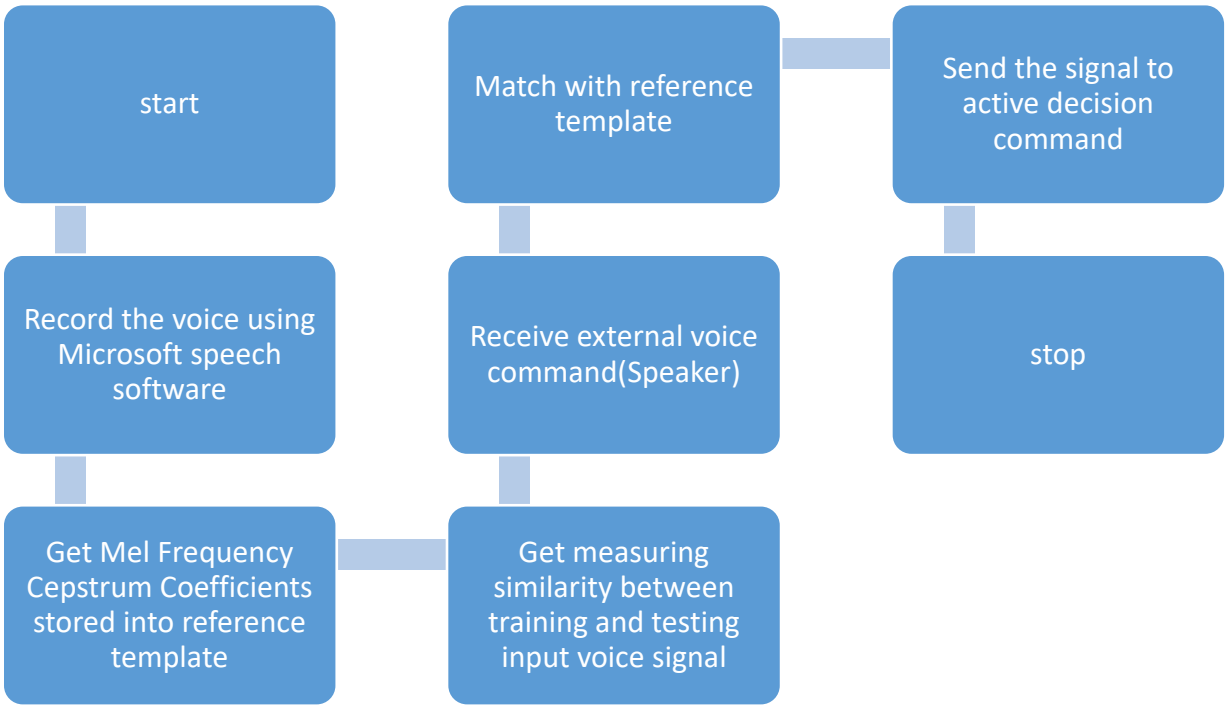
Let me tell you about all the features our JARVIS will possess. It will wish you according to the time and it will hear your basic commands such as searching or opening a window on the web browser, for example, YouTube, Google, Reddit, etc. You can also code it in a way enabling it to send emails for you. Speech is an effective and natural way for people to interact with applications, complementing or even replacing the use of mice, keyboards, controllers, and gestures. A hands-free, yet accurate way to communicate with applications, speech lets people be productive and stay informed in a variety of situations where other interfaces will not. Speech recognition is a topic that is very useful in many applications and environments in our daily life. Generally speech recognizer is a machine which understands humans and their spoken word in some way and can act thereafter. A different aspect of speech recognition is to facilitate for people with functional disability or other kinds of handicap. To make their daily chores easier, voice control could be helpful. With their voice they could operate the light switch turn off/on or operate some other domestic appliances. This leads to the discussion about intelligent homes where these operations can be made available for the common man as well as for handicapped.

2. EXISITING METHODOLOGIES

- Send gmail messages
- Dynamic News reporting at any time
- Open any website with just a voice command
- Plays music
- Tells time
- Wikipedia powered AI
- Dictionary with intelligent Sensing i.e auto checking if spell mistake

- Weather report such as temp,wind
- speed,humidity,weather description
- Latitude and longitude

Flowchart for Voice Flow Algorithm:



Voice recognition works based on the premise that a person voice exhibits characteristics are unique to different speaker. The signal during training and testing session can be greatly different due to many factors such as people voice change with time, health condition (e.g. the speaker has a cold), speaking rate and also acoustical noise and variation recording environment via microphone.

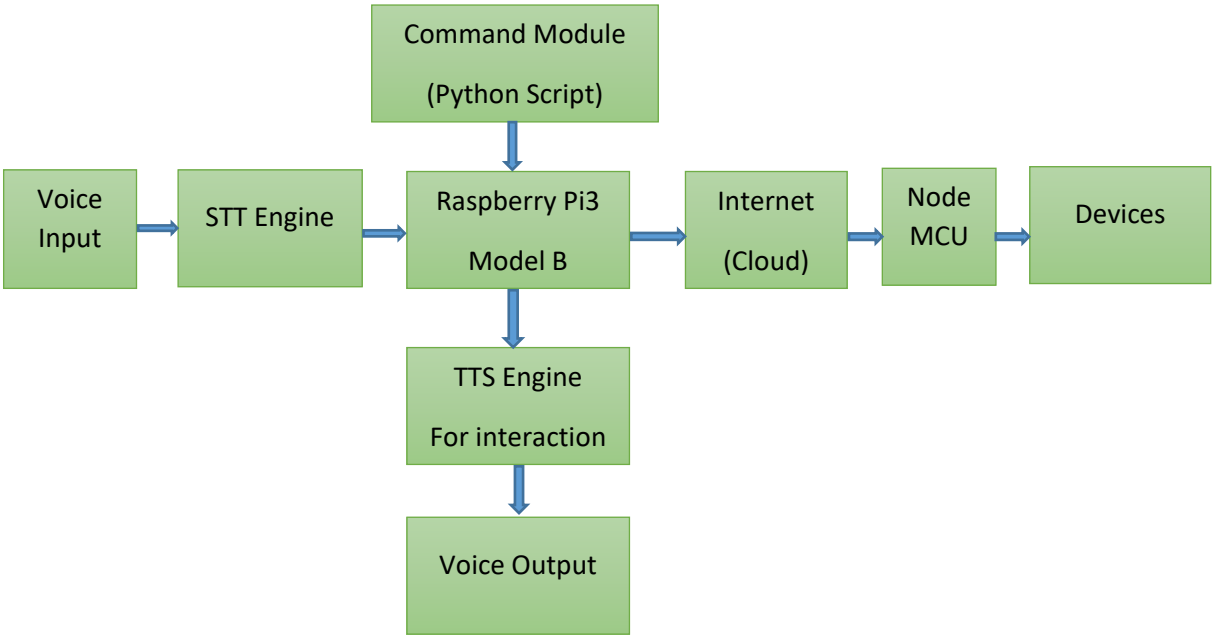
Process	Description
1) Speech	2Female(age=20,age=53) 2male(age=22,age=45)
2) Tool	Mono Microphone Microsoft Speech Software
3) Environment	College Campus
4) Utterance	Twice each of the following Word 1. Volume Up 2. Volume Down 3. "Jarvis there" 4. Introduction yourself 5. Show date
5) Sampling Frequency	16000KHZ
6)Feature Computational	39 double delta MFCC coefficient

3. PROPOSED SYSTEM

- Compile reports on any topic asked by the user
- Scan targets of hackers
- Controlling desktop commands like Switch user, Log off, Lock, Restart, Sleep

This work focuses on providing with the easiest and the most effective methods to communicate with the system by giving voice commands through natural languages. This project eliminates the hectic process of tiring configurations and setups and overheating of the system which ultimately affects the performance. The conversation by natural languages to the system and its response makes the user feel like he is talking to another human and makes him ignore the fact that a system is performing all the tasks.

Architecture:



4. CONCLUSION

This is how simple it is to build your own voice assistant. You can add many more features such as play your favourite songs, give weather details, open email application, compose emails, restart your system, etc. You can integrate this application into your phone or tablet as well. Have fun exploring and developing your own Alexa/ Siri/ Cortana. Further, in the long run, Jarvis is planned to feature auto deployment supporting elastic beanstalk, backup files, and all operations which a general server administrator does. The functionality would be seamless enough to replace the server administrator with Jarvis.

5. REFERENCES

- Rabiner Lawrence, Juang Bing-Hwang. Fundamentals of Speech Recognition Prentice Hall , New Jersey, 1993, ISBN 0-13-015157-2
- Deller John R., Jr., Hansen John J.L., Proakis John G. ,Discrete-Time Processing of Speech Signals, IEEE Press, ISBN 0-7803-5386-2
- Proakis John G., Manolakis Dimitris G.,Digital Signal Processing, principles, algorithms, and applications, Third Edition, Prentice Hall , New Jersey, 1996, ISBN 0-13- 394338-9
- Ashish Jain, Hohn Harris, Speaker identification using MFCC and HMM based techniques, university Of Florida, April 25,2004.