VOICE ASSISTANT – AN ARTIFICIAL INTELLIGENCE SPEECH RECOGNITION MODULE THAT TRAINS THE MACHINE TO PERFORM TASKS USING SPEECH RECOGNITION

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ABSTRACT

In the technological advancement, Computers are playing major role. The field is expanding exponentially. Artificial intelligence is the one of the widespread branch of computer science deals with building intelligent systems. AI is a bigger concept in Computer Science. It has various subsets, some of the notable subsets are Machine Learning, Deep learning, Robotics, Natural processing, Expert Systems, Speech Recognition and Machine Vision.

The speech recognition is the one of the concept of Artificial Intelligence. This manuscript addresses on training the machine to accept the commands through speech. System accepts vocal instructions and performs the functions.

KEYWORDS: *Speech Recognition, Machine Learning, Supervised Learning, Unsupervised Learning, Natural Language Processing.*

1. INTRODUCTION

Intelligence is the ability to think, calculate, reason and learn from past experience, to solve the problems and to adapt to new situations.

This manuscript specifically trains the computer system to accept commands by recognising the voice.

2. RELATED WORK

There are four types of learning in Artificial Intelligence and they are supervised learning, unsupervised learning, semi-supervised learning and reinforcement.

To develop the intelligent system, the python language is used to process the natural language processing.

3. METHODOLOGY

The set of predicates defined in the system so that system can learn and give the predicted output.

The designed module addresses the following issues:
a) Playing Song on YouTube.
b) Search in Wikipedia
c) Search in Google
d) Opening of installed application
e) Reading News Paper
f) Showing current date and time of the system.
g) Conducts interactive sessions like Jokes and asking various questions etc...

## 4. VOICE ASSISTANT WORKING MODEL
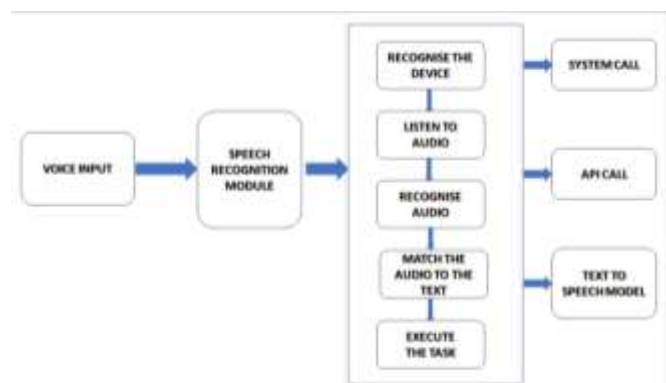
5. SAMPLE CODE OF SPEECH RECOGNITION MODULE

```
import speech_recognition as sr
import pyttsx3
import pywhatkit
import datetime
import wikipedia
import pyjokes
import webbrowser
import os
listener = sr.Recognizer()
engine = pyttsx3.init()
voices = engine.getProperty('voices')
engine.setProperty('voice',voices[1].id)
```

```
def talk(text):
    engine.say(text)
    engine.runAndWait()
def wish_user():
    hour=datetime.datetime.now().hour
    if hour>=0 and hour<12:
        talk("Hello sir,Good Morning")
        print("Hello sir ,Good Morning")
    elif hour>=12 and hour<18:
        talk("Hello sir ,Good Afternoon")
        print("Hello sir ,Good Afternoon")
    else:
        talk("Hello sir,Good Evening")
        print("Hello sir,Good Evening")
wish_user()
```
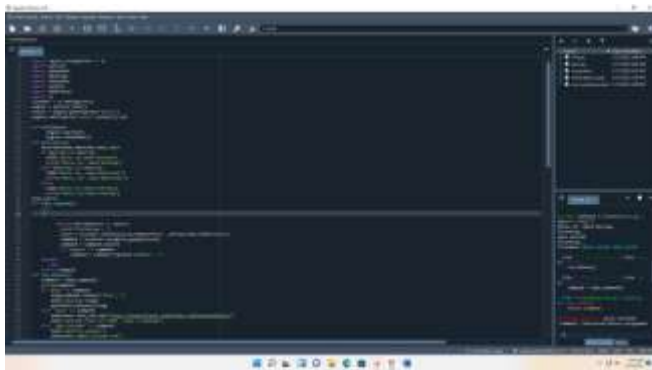

SCREEN SHOT OF SPEECH RECOGNITION MODULE

Machine is trained through the code and the voice input is converted in to natural language and further it checks for the predicates defined in the code, if there is a match, the system executes the command.

6. OUTPUT
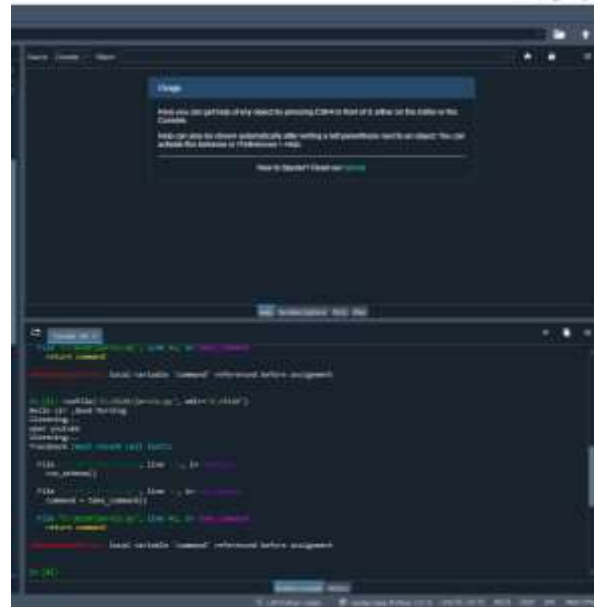
7. CONCLUSION

The machine can be trained according to the user needs. If the dictionary of the system is increased exponentially machine can process natural language, further it can be trained through the past experience.

8. ACKNOWLEDGEMENT