MIT School of Engineering
Department of Computer Science and Engineering

Project Synopsis

Group ID: 05
Project Title: AI Based Smart Assistant
Name of the Guide: Dr. Suvarna Joshi Vaidya
Group Members: 04

Enrollment Number	Roll No.	Name of student	Email Id	Contact Number
MITU20BTCS0342	2203221	Vince Dsouza	vincedsouza02@gmail.com	9767851524
MITU20BTCS0314	2203046	Tanuj Sinha	tanujsinha2002@gmail.com	8484040035
MITU20BTCS0003	2203391	Aaditya Nair	Aadityanair1803@gmail.com	7757984061
MITU20BTCS0080	2203189	Chaitanya Yadwad	Chaitanyayadwad8@gmail.com	8999246722

Problem Statement: The user **is a** human being, **who needs** technical assistance to overcome traditional methods of living and adapt to an urban way of life **because** the latest technology has made it much easier to go about life with less human effort and stress. Yet this change is not made readily available to individuals who have yet to embrace this new shift of lifestyle.

Abstract: Voice assistants come in somewhat small packages and can perform a variety of actions after hearing a wake word or command. They can answer questions, play music, take notes, set an alarm, send messages, etc. Voice assistants are not to be confused with virtual assistants, which are people who work remotely and can therefore handle all kinds of tasks. Rather, voice assistants are technology based. As voice assistants become more robust, their utility in both the personal and business realms will grow as well. This project works on voice input and gives output through voice and displays the text on the screen.

One of the major hurdles to tackle in this project would be to provide a smooth experience for individuals who want to transition into a life where a computer assistant gives aid in their day-to-day activities and not overwhelm or intimidate users from embracing this new shift in their lifestyle.

This voice assistant has connected the world wide web to provide results that user has questioned. We have created our voice assistant “LITA” using Python programming language as python offers a large number of libraries. Voice assistants are so easy to use that many people forget to stop and WONDER how they work. How do voice assistants understand us? Is it magic? A complex system of codes? An actual person listening on the other end?

The answer is less complicated than you might think. The application works like Siri, Google Assistant etc. The U.I of the application is self-explainable and very minimum. It takes voice as input. The system is being designed in such a way that all the services provided by the mobile devices are accessible by the end user on the user's voice command. The modules used in our project are :- pyttxs3, Speech Recognition, Web Browser, Wikipedia, etc.

Literature Survey: Detail survey

1. Personal Voice Assistant -
Mr. K. Vikram Reddy, Assistant Professor, Department of Computer Science and Engineering, Matrusri Engineering College, Saidabad, Hyderabad, Telangana,
Voice assistants have been around for a while and have important innovations in waves. for voice assistant Dictation, voice commands, and searches have all become a typical component of wearables and smartphone devices. The study is the result of an oversight examination of
the literature to provide a general understanding of voice (theory and concepts) control, virtual helpers, application areas, and more.

A decade or so later, IBM created and presented its
Shoebox. Machine. The gadget acknowledged and responded to 16 different spoken words, all ten digits including "0" to "9" and calculations commands like (IBM, 2018) Shoebox Machine Plus or Minus 16 spoken words were identified and replied to. Only the ten numbers "0" through "9" are included by a designated speaker, in English.

2. Survey on Virtual Assistant: Google Assistant, Siri, Cortana, Alexa -
Amrita S. Tulshan and Sudhir Namdeorao
A method based on computers that executes a command on a subset of objects using a voice user interface. The subset is chosen from a given number of items, each of which has an object type and at least one taggable field with a corresponding value. The group of items is stored in the memory of the laptop. An utterance is a command, an object type selection, a taggable field selection, and a price for the taggable discipline that is obtained from the person. When the command is given, at least one item from the group of gadgets is retrieved in response to the user's selection of the sort, and the item's price in the taggable area selection

matches the user's input on the taggable field charge. The object contains text content that will be converted to speech output.
They envisioned computers one-day understanding natural language,considering what we need, when and where we need it, and actively taking full responsibility for us.
We agree as computing systems are proving to be smaller and more ubiquitous [e.g. B. wearables and the Internet of Things (IoT). Recognizers are designed to transform a person's verbal representation into another data method, such as text. A portable personal correa with a speech recognizer and a distinctive dialect processor is disclosed.
It's called a personal assistant with speech recognition intelligence that takes customer input regarding speech or content types, processes it, and returns it in various structures such as B. An activity performed or an element directed to an end customer. In addition, this proposed framework can change the communication method between end customers and mobile phones.
Open data is currently garnering attention for its imaginative governance, especially in the areasof government, life science, and smart entrepreneurship.

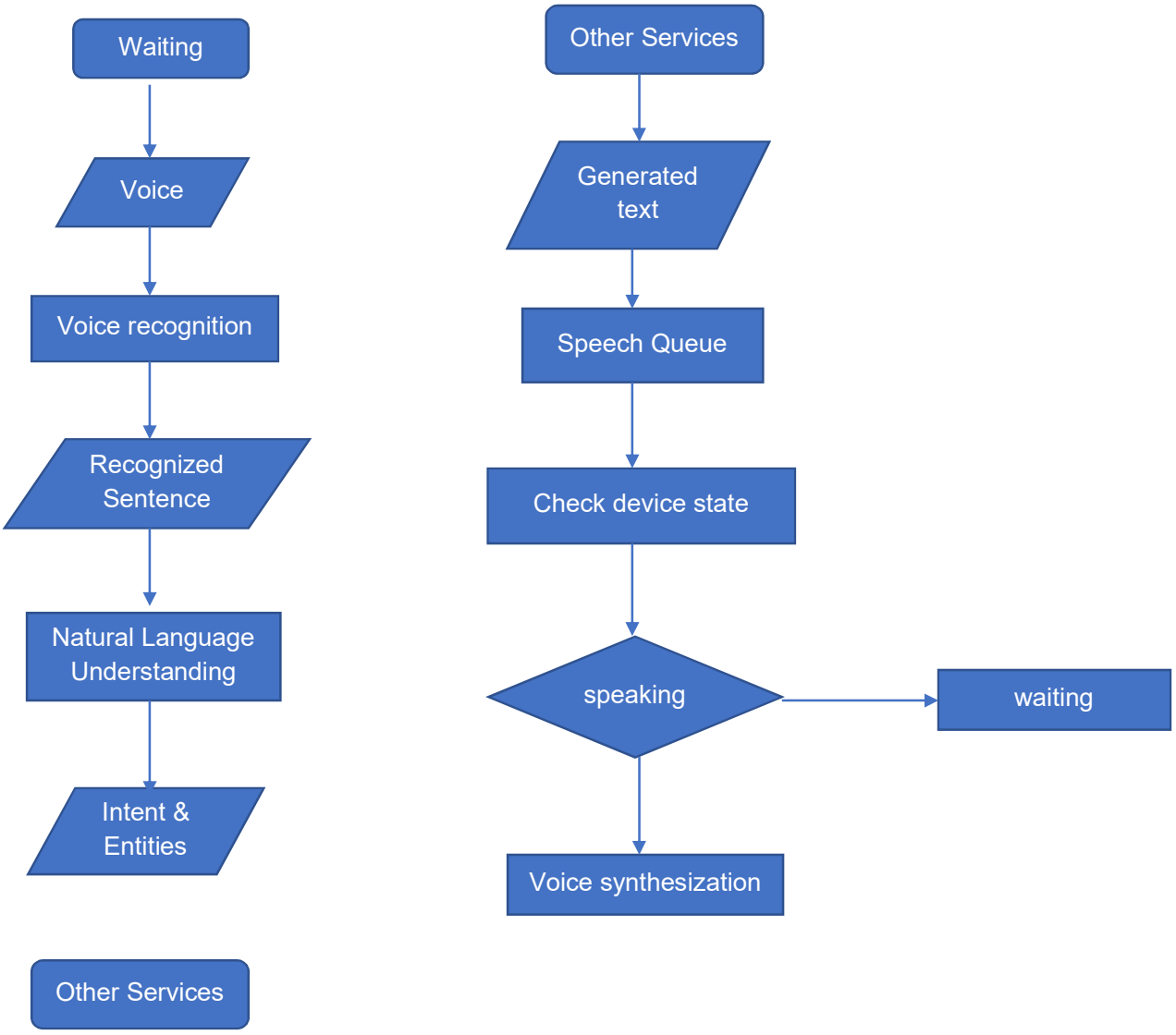
3. Artificial Intelligence Based a commutative Virtual Voice Assistant Using python and visual studio code technology -
Raj Kum Jain, Vikas Sharma, Mangilal, Rakesh Kardam, Mamta Rani

There have been some significant advances and innovations in this area of virtual assistants (VA) with voice recognition. This is due to the huge demand for the device. This helps devices with voice recognition only, such as smartwatches or fitness bands, smart speakers, Bluetooth headphones, intelligent mobile phones, AI-based laptops or desktops, TV.

A new set of AI technologies are continually being developed to improve his performance in automatic voice search. As the amount of knowledge in has grown exponentially and is now called big data, the easiest way to improve the results of the virtual assistant is to incorporate the assistant into machine learning and depending on usage train the device.

Machine learning programming is only a subset of artificial intelligence technology. This is one of the most important and useful advances in this technology.

Proposed System (Flow-Chart):



Conclusion: Smart speakers use has spread with impressive speed. The voice assistant's technology is more than affordable and offers many benefits to its users. Having a personal assistant with access to the unlimited knowledge stored on the internet - isn't this what mankind dreams about?
However, smart speakers are not just another consumer electronics device.

They are a completely new sales channel for local small and medium-sized businesses.
There can be no doubt that voice assistants are, and will continue to become, a great feat of human ingenuity and they are already creeping into our lives in some shape or form.
With the eventual roll-out of 5G and the improvement in machine learning voice assistants may be setting themselves up to be a tool we cannot live without.
The goal is to provide all the benefits of an assistant to the user while abstracting most of the workings away from their eyes and providing a natural and intuitive form of communication which is easy to use and understand.
However, before we get to that stage, there are hurdles to cross which include heavy investment, improvement in the technology and confidence from consumers that this device that is in their lives does not pose a risk to their privacy.
The future of voice search and assistants is looking bright. With the number of people already seeing how convenient those tools can be and the growing number of devices that use voice recognition. It's clear that the technology will soon be everywhere, and with 5G and improvements in machine learning, voice assistants might at some point become tools we can’t live without.

Annexure I: Form A-Title Approval (for offline mode)
Annexure II: Form B-Market and financial feasibility (verify from guide)
Annexure III: Literature survey paper or links