

**TOPIC:**

**VIRTUAL ASSISTANT**

**Team member:**

**Name Roll no Registration no Section**

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**ABSTRACT**

This project discusses how technology is used to create intelligent Virtual Assistant. It will look examples of intelligent Virtual Assistant with a focus on userbase data. Using, with different NLP currently being used, with different categories of support, and examine the potential usefulness of one specific piece of software as Virtual Assistant. This engages the ability to communicate socially through natural language processing, holding and analysing data with context of the user. It is suggested that new technologies may soon make the idea of Virtual personal assistant a reality.

Experiments conducted on this system ,combined with user testing ,have provided evidence that a basic program with natural language processing algorithms in the form of a VPN , with basic natural language processing and ability to function without the need for other type of human input (or programming ) may already be viable.

**INTRODUCTION**

Virtual voice assistant helps us do things you do everyday. It is a multi-functional artificial intelligence software that provides a single window environment to control your computer and perform wide range of tasks using voice commands. It can take a dictation (speech to text), search information on the Internet, it can play the songs you want to hear, it can open or search files on your computer, it can set alarms and reminders, it can do mathematical calculations, remember notes for you, automate various computer tasks, read eBooks and much more.

This virtual voice assistant can read text aloud naturally. Hence it useful for user to find and search queries easily without interacting with keyboard.

Our automation has defined functions that helps in finding out the definitions, antonyms, synonyms etc. of any word. It can also define medical terms.

This program uses the knowledge of AI and implementation of natural language processing by using libraries such as speech\_recognition .

**METHODOLOGY**

The general operating principle of artificial intelligence assistants is the ability to make personal decisions based on incoming data. The software has to include an advanced set of tools for processing received data, in order to make proper individual choices. Artificial neural networks were invented to help develop the discussed software. Such networks imitate the human brain’s ability to remember, to help the assistant recognize and classify data and customize predicting mechanisms based on thorough analysis. The memory process is executed deductively, i.e. topdown: first, the app analyzes several variants of outcome; then, it remembers the variants applied by a human (i.e. the system remembers proper answers to the question “How are you?” such as “I’m fine”, “Not very well” etc., and ignores answers like “Yes”, “No” and others) and “selfeducates” to be able to generate situation-based algorithms later. It is not necessary to manually enter information into the app to build your own personal artificial intelligence assistant.

By using NLP it converts speech to text and then afterwards it uses various commands to operate .

Os functions helps in calling the different files and resources from the pc.

**CONCLUSION**

By using and implementing AI natural language processing(NLP) we care able to create such automations which are very useful in making AI based applications like controlling smart house or creating virtual robots and automation that performs all the human related tasks

**WORK DISTRIBUTION OF TEAM MATES**

1. **GULSHAN :**

* Implementation of basic structure of the project
* Implementing different libraries including pyttsx3, cv2,os,smtplib,random,webbrowser
* Working with speech\_recognition library and providing special functions like shutting down pc in voice command.

1. **SHASHANK :**

* implementation of exceptions
* providing the basic work flow of project
* debugging the code.

1. **TAUSIF:**

* Help implementing mathematical functions and calculations.
* Providing the idea for the project.

1. **BISHAL SAHA:**

* Helped in making the project to implement camera access on voice command.
* Providing the basic gui.

1. **RAVITESH CHAUDHARY:**

* Implementation of GUI using libraries like PIL and Tkinter,tkk
* Implementation of cv2 library to use
* Implantation of email and Wikipedia library for searching over voice assistant.