

# Personal Virtual Assistant (“DANI”)

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**Abstract-** Smart voice assistants are gadgets that connects to the Internet, listen to their location and also respond to the instructions given by users to extract information online, manage resources, or notify the user with incoming messages, reminders, and the like. With their growing visibility in smart homes, their app seems to be limited only by the imagination of developers, who connect this off-the-shelf device to existing programs, Internet resources, or electronics. However, as their location is easy to use in their home, their location also raises concerns about user safety and privacy. In order to justify the trust placed on devices, devices must be protected from unauthorized access and the background infrastructure provided for speech and text analysis, command interpretation, and communication of other services and electronic devices must maintain data privacy. To investigate current risks, mitigation measures, and common assumptions in this emerging field, add recent research findings to the results of systematic reviews. We were able to compile a list of six main types of user privacy risks, which slightly confirm previous findings, but also find additional problems. We discuss these threats, their associated attack vectors, and the limits users can take to protect themselves are data retention, processing and storage of data, Side Channel Attacks, Attacks on Voice Models using Adversarial Samples.

**Keywords-** Smart Voice Assistants, Visual Assistants, Smart Home, Privacy, Security, Organized Document Review, Alexa

## I – INTRODUCTION

**T**oday almost all jobs are done digitally. We have a smart phone in hand and it is nothing less than having land in your hands. These days we don't even use our

fingers .Currently the work is over. There are plans where we can say to the Father of the Scriptures, "I will be late today." Text is also being sent. That is the work of the Visible Assistant. It also supports specialized functions such as booking a flight or getting the cheapest book online from various e-commerce sites, and providing a visual booking link that helps to automatically search, find, and order online orders. Virtual Assistants are software programs that help you simplify your daily activities, such as displaying a weather report, creating reminders, making a shopping list etc. They can take instructions in text or voice. Smart voice assistants need a request name or wake-up call to activate the listener, following the command. In my project the name DANI. We have many visible assistants, such as Apple's ongoing home over the next few years as evils increase.

Siri, Amazon's Alexa and Microsoft's Cortana. In this project, the chosen name of the DAN Project was started on the basis that there is a sufficient amount of publicly available data and information on the web that can be used to create a visual assistant capable of performing it.wise decisions for the activities of ordinary users.

### 1.1 Purpose

The purpose of the virtual assistant, voice player, music player, authentication, setting distribution, spreadsheets, voice play, engineering, networks, visual aids allows users to speak voice commands in the native language to use the device and its functions.

### 1.2 Width

Voice assistants will continue to provide more for each as they improve the difference between the words. However, entrepreneurs are not the only ones who have

to deal with the problem of voice development as genres are needed to understand the potential of each development and organization and when making their brand direction. They will also need to focus on the maintenance of the user's

This is because of the visual interface with the available words. Users should be able to see or touch the voice interface.

## II-LITERATURE REVIEW

Personalized searches are performed using search engines for publishers and targeting services that often include computer science textbooks. These include ACM Digital Library, Google Scholar, IEEE Xplore, and Science Direct. As Apple's Siri is the first product of IVA to come on the market in 2010 and as book search was conducted in August 2019, we chose courses especially at this time. Search characters are displayed in Appendix. We started with SS1 (real search series), designed to carry both computer hardware and software product names. We have selected the term "smart visual assistant" and the same concept that is appropriate as a board term to capture as many lessons as possible. The first part of the search engine contains RQ1-related keywords, and the second part of the search series contains RQ2-related keywords. Character set by some of the search engines needed to refine the search string. SS1 was broken down into separate combinations while still making sure it included all the terms and met the required number of characters.

The most popular use of the iPhone is SIRI which enables the end client to transfer the final client in various ways by voice and also respond to the client's voice costs. Named as a Personal Assistant with Voice Recognition Intelligence, which takes a client's contribution to the type of voice or content and analyzes it and returns profits with a variety of properties such as a task or object directed to the end client.

### Comparative Analysis with the Existing System Needed to Discuss

Most existing projects use only speech recognition using emotional networks. Although their systems are relatively accurate, they are not for real use or efficient to have any real use. There are a few basic techniques used by them:

The app gives the user extra power over the desktop with a command like restart and shutdown ... Also identifies location by connecting to gps services. The whole system is written in such a way that it is done the way we wish. The landmark project he is trying to achieve is trying to increase the accuracy of speech and text software. This means that the software will in theory be able to convert any speech with minor changes or

different pronunciations into the high level of accuracy and precision required for daily VPA applications. The software actually combines voice recognition using sensory networks and lip detection using a reading machine to increase the accuracy of spoken word. For people with different pronunciations, voice recognition will not be in vain because the words they speak will be very different from the real word from a computer view because the vectors or values reserved for that word would be obtained only based on the spoken word. So this is where recognition of lip movement begins. In many contexts, although in a different way, the movement of the lips remains the same enough to get a name. Therefore, lip movement recognition helps to reduce some of the various words that may be similar to voice recognition software.

## III-PROJECT METHODOLOGY

The Voice Assistant (VA), a type of voice-enabled genius, is no longer just an actor in science fiction films. Currently, voice is integrated with a variety of products such as smartphones (mobile apps) and smart speakers in consumer homes. While human personality shapes the way we interact with the world, voice helpers can influence our daily interactions with our environment. This study identifies seven VAP Assistant features for three commonly used mobile applications: Microsoft's Cortana, Google Assistant, and Amazon Alexa. Voice Assistant is an app that helps users to interact with their devices using voice commands in an intuitive and natural way. Recently, many voice assistant applications are popularly distributed on smartphones and smart voice-controlled speakers.

### 3.1 Model application

The foundation of this project is built using Python programming language which gives us all the benefits as it helps us to reduce code from line tone to minimal. speech recognition, Ptyss3x etc. And we plan to create some of our own packages to improve the project in every possible way. we can. Initially, the system is in idle mode. As it receives any wake-up call it starts working. The instruction received is determined by the list of questions or tasks to be performed. Specific action is taken accordingly. After the question is answered or the task is completed, the system waits for another command. This loop continues unless it receives a stop order. At that moment she fell asleep again.

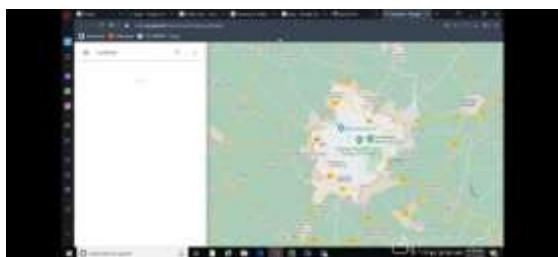


Fig 1: GUI



Fig 2.Implementation

#### IV- HARDWARE AND SOFTWARE REQUIREMENTS

The proposed system will have the following functions:

- The system will always obey the instructions and the listening time is flexible which can be adjusted according to the needs of the user.
- If the system is unable to collect data from user input it will always request a repeat until the desired number. times.
- This system can have male and female both voices according to user requirements.
- Features based on current version include playing music, emails, texts, searching on Wikipedia, or opening installed apps, opening anything in a web browser, etc.
- The system will continue to obey the instructions and the listening time is flexible which can be adjusted according to the needs of the user.
- If the system is unable to collect data from user input it will keep asking for a repeat until the number you want. times.
- The software is designed to be simple so as not to be a burden on the machine you are using. This program is designed to remember the hardware that is usually available in conjunction with software. Here are a few computer and software requirements for visibility assistant

##### 4.1 Computerhardware

- Pentium-pro processor orlatest.
- RAM 512MB ormore.

##### 4.2 Software

- Windows 7 (32-bit) orhigher
- Python 2.7 orlater
- ChromeDriver
- Selenium WebAutomation
- SQLite

#### V-SURVEY OF TECHNOLOGY

Technology is evolving day by day in order to improve function. We have applied the current technology to implementation of this project. Some technology that we the used ones are as follows:

##### 1.Python(Spyder)

Python consists of oops (Object Oriented Programming),best quality, translated and edit languages. Strong,a very useful language that focuses on immediate use development (RAD). Python helps you easily write and code.Python can use the same concept with code up to 1/5compared to other languages. Python provides a great listfor the benefit of all. The use of Python seems to be impossible limited to just one job. Its growing popularity has grownallowed it to launch some of the most popular ones as well complex processes such as Artificial Intelligence (AI),Machine learning (ML), natural language processing, datascience etc. Python has many libraries for all your needs this project. . In DANI, the libraries used are speech recognition for voice recognition, Pyttsx text goes to speech, web selenium flexibility etc.

##### 2.Inspects Of AI

Artificial intelligence (AI), digital computer skills or a computer-controlled robot to perform tasks that often related with intelligent creatures. The name says often used in a project to develop a given system

through the processes of understanding the human features,such as being able to think, interpret, act normally, or act learn from what happened in the past. Since the advent of digital computer in the 1940s, it has been observe that computers can be organized to perform more complex tasks – of for example, to find evidence of mathematical theory or to play chess - with great success.

##### 3.Inspects Of ML

What exactly is ML?

Machine learning (ML) is a form of artificial intelligence (AI) that helps the software programs to become more efficient predicting results without clearly planning to achieve that machine learning algorithms use historical data as input predicting a new output value.

## VI-RESULT

We have employed this idea by means of Python, Machine Learning and AI. Our main aim is to assist the users in their tasks with the help of their voice commands. This can be done in two phases. Firstly, taking the audio input from the user and converting it to an English phrase with the help of Speech Recognition API. Secondly searching for the task user wants to perform and then redirecting it to the linux server with the help of HTTP Protocol and displaying the result on the web browser.

Virtual assistant is a less time consuming. Virtual assistant is a software that understands commands and complete task assigned by client. Virtual assistant use NLP to match user voice or text input with executable commands. With the help of virtual assistant, you able to run your machine-like laptop or PC's on your own command. It is the fast process; therefore, it saves time. Virtual assistant is working for you at set times, so always available to you and able to adapt to changing needs quickly. Virtual assistant will be available to you and, should their workload enable, help others too, such as family and colleagues.

The system can allow longer conversations with users through a great chat site. This VPA program uses speech, graphics, video, body language and other communications tools for both input and output channels.

It may be a good solution that can be used with packages, which includes:

1. Respond to customers
2. Customer service agent
3. Training or education
4. Facilitate transactions
5. Shopping on VOnline
6. Travel information.

## VII- CONCLUSION

Voice Assistant was created in Spyder 3.9 with the help of technologies such as Python, Performance Components Intelligence and machine learning with the help of a

multitude of libraries. The helper successfully captures the word, recognizes it as well delivers the output as per the instructions once situation. Overall the assistants work effectively in almost all of them status and performs almost all functions.

## VIII- ACKNOWLEDGMENT

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