



## Synopsis On

# DESKTOP VOICE ASSISTANT

For Course

## Artificial Intelligence (INT 404)

BY:

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# **INTRODUCTION**

Desktop Voice Assistant generally makes human interaction with computers possible, using speech recognition to understand spoken commands and answer question, and typically text to play a reply. Desktop voice assistant are software agents that can interpret human speech and respond via synthesized voices.

## **IMPORTANCE OF THE PROJECT**

This project is based on desktop voice assistant using voice recognition in the operating system which includes all the functions and services of:- Email services, performing search operations on the search engines, Wikipedia search engine camera, translator, Bluetooth headset support, help menu and maintaining the data on system, it also interact with operating system application and perform operations.

## **PURPOSE OF THE PROJECT**

According to the overall description in the context, the purpose of the project is to developed the voice recognition system for the desktop that provides all the functionalities as message transformation, mail exchange, alarm, event handler, location services, music play service, checking weather, search engine (Google, Wikipedia), camera, Bluetooth headset support, help menu and for the basic functionalities of the operating systems.

Many years ago the voice recognition system for the cellphones and for the desktop has been launched and is in the use generally the first voice recognition system was used for enhancing the search engines results. Then further the desktop voice recognition system was generated and implemented and still it is being developed for

the better speed and high accuracy capturing of the sounds and for optimizing the compatibility and speed of the processing.

This project is focusing on the development of the desktop voice recognition system (recognition, generate and analyze corresponding commands, intelligent responses automatically), for the relevant API's as well as Google API's, Wikipedia API's and device references ranging from Speech-To-Text, Text-to-speech technology, Bluetooth support and camera; advanced techniques for the own operating system functions. The main structure and construction of the project has been illustrated with its goals.

## REQUIREMENT AND SPECIFICATION

Our project is based on python modules and its libraries that provides access to system functionality and is used to construct a more complex structure.

### PYTHON LIBRARIES:

- **Pytsx3:** pytsx3 is a text-to-speech conversion library in Python. Unlike alternative libraries, the pytsx3 module supports two voices first is female and the second is male which is provided.
- **Speech Recognition:** It is one of the most important library of the python language as it helps to generally convert the text to speech form by the conversion of the text into ASCII values and then into binary forms and then the conversion.
- **Date time:** A date in Python is not a data type of its own, but we can import a module named date time to work with dates as date objects.
- **Wikipedia:** It is the library in the python which generally makes it easy to access and parse data from Wikipedia.
- **Web Browser:** The web browser module provides a high-level interface to allow displaying Web-based documents to

users. Under most circumstances, simply calling the `open()` function from this module will open url using the default browser . You have to import the module and use `open()` function.

- **Os:** The OS module in python provides functions for interacting with the operating system. OS, comes under Python standard utility modules. This module provides a portable way of using operating system dependent functionality. Path modules include many functions to interact with the file system.
- **Smtplib:** Python provides `smtplib` module, which defines an SMTP client session object that can be used to send mail to any Internet machine with an SMTP or ESMTP listener daemon. Host –This is the host running your SMTP server.

## EFFECTIVENESS OF THE PROJECT

Speech recognition technology entered the public consciousness rather recently, with the glossy launch events from the tech giants making worldwide headlines. In fact, communicating with technological devices via voice has become so popular and natural that we may be justified in wondering why the world's richest companies are only bringing these services to us now.

The effectiveness of this project will be definitely that it will increase the compatibility and optimizing the speed of the speech recognition. It will help the operating system for the better performance and as well as the fast communication between the user and system so that the user doesn't need to use the gestures and keyboard and for all the process.