Voice-assistant

MINI PROJECT – I

SYNOPSIS

Department of Computer Science & Application

Institute of Engineering & Technology

SUBMITTED TO: -

Mohd. Aamir khan

(Technical Trainer)

SUBMITTED BY: -

Aayush Garg

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Acknowledgement

It gives us a great sense of pleasure to present the synopsis of the B.Tech mini project undertaken during B.Tech III Year. This project is going to be an acknowledgement to the inspiration, drive and technical assistance will be contributed to it by many individuals. We owe special debt of gratitude to Mohd. Aamir khan, Technical Trainer , for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towards a constructive goal and for his constant support and guidance to our work.

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AAYUSH GARG

ABSTRACT

The study described in this research report focused on variables which were posited to capture students' experiences of the online tutoring service, e-Learning, and relationships with the students' perceptions of their academic capabilities and academic performance. A theoretical model incorporating variables from the Technology Acceptance Model, the Theory of Planned Behaviour, and Social Cognitive Theory was developed and tested. A total of 506 undergraduate students from a university located in Sydney, Australia, completed an online survey. Data were analysed using confirmatory factor analysis (CFA) and structural equation modelling (SEM). The results suggested that the perceived usefulness of E-Learning had a direct positive relationship with academic self-efficacy, and an indirect positive association with the students' academic grades through academic self-efficacy. There was a direct positive relationship between academic self-efficacy and students' academic grades. The implications of these results and directions for future research are discussed in this report.

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INTRODUCTION

When talking about Service Automation, we should first talk about what led us to the idea of automating services. Automation isn't a new concept and it dates back centuries to when humans invented basic automating tools like pulleys to make working easier. Automation is the use of various control systems for operating equipment such as machinery, processes in factories, steering of vehicles, aircraft, ships, and other applications. Automation technology has matured to a point where a number of other technologies have emerged from it. For example, service automation and artificial intelligence. Advanced robotics is a specialised branch of automation in which automated machine possess certain levels of artificial intelligence in order to enable increased workforce capabilities or task functions.

Automation provides benefits to almost every industry.

SOFTWARE AND HARDWARE REQUIREMENTS

- Python3.0
- Installed python libraries
- Vs-code
- Minimum 4GB Ram
- Intel i3 processor or Ryzen-3
- Window 10

PROJECT DESCRIPTION

As we know Python is a suitable language for scriptwriters and developers. Let's write a script for Voice Assistant using Python. The query for the assistant can be manipulated as per the user's need. Speech recognition is the process of converting audio into text. This is commonly used in voice assistants like Alexa, Siri, etc. Python provides an API called SpeechRecognition to allow us to convert audio into text for further processing. we will look at converting large or long audio files into text using the SpeechRecognition API in python. it needs and in the format required.

The project needed python modules are are as follows:

- **Modules:**

- Wikipedia:- As we all know Wikipedia is a great source of knowledge just like GeeksforGeeks we have used the Wikipedia module to get information from Wikipedia or to perform a Wikipedia search. To install this module type the below command in the terminal. pip install wikipedia

- Speech_Recognition:- Since we're building an Application of voice assistant, one of the most important things in this is that your assistant recognizes your voice (means what you want to say/ ask). To install this module type the below command in the terminal.
  pip install SpeechRecognition

- Web_browser:- To perform Web Search. This module comes built-in with Python.

- Datetime:- Date and Time are used to showing Date and Time. This module comes built-in with Python.

- Subprocess:- This module is used to get system subprocess details used in various commands i.e Shutdown, Sleep, etc. This module comes built-in with Python.

WORKING

- It can send emails on your behalf.
- It can play music for you.
- It can do Wikipedia searches for you.
- It is capable of opening websites like Google, Youtube, etc., in a web browser.
- It is capable of opening your code editor or IDE with a single voice command.
- It can shut down and Restart as per your command,if you want so.
- It can play music randomly from your pc as per your command.
- It can tell you a joke.
- It is capable of empty recylcle bin on your command.
- It is capable of write a note and can also read it as per your command.
- It can tells you the right time .

IMPLEMENTATION

Python has a friendly, approachable syntax that's easy to read and understand relative to other programming languages. Plus, the fact that it's open-source means that there's a huge variety of tools, libraries, frameworks, and support available for it. This is why Python is one of the go-to practical programming languages for running simple automations.

While it would take much longer to fully understand how Python works, some tasks can be automated with simple Python code.

There are a huge range of tasks that you might opt to automate by writing Python scripts. Python users can use their creativity to create innovative automated solutions for the boring stuff they encounter in their daily life I.e Sending out, replying to, and sorting emails, Filling out PDFs and Excel files, Scraping data from web pages and saving it in the harddrive

ABOUT VS-CODE.

Visual Studio Code is a source-code editor that can be used with a variety of programming languages, including Java, JavaScript, Go, Node.js, Python, C++, C, Rust and FortranIt is based on the Electron framework,which is used to develop Node.js web applications that run on the Blink layout engine. Visual Studio Code employs the same editor component (codenamed "Monaco") used in Azure DevOps .

Out of the box, Visual Studio Code includes basic support for most common programming languages. This basic support includes syntax highlighting, bracket matching, code folding, and configurable snippets. Visual Studio Code also ships with IntelliSense for JavaScript, TypeScript, JSON, CSS, and HTML, as well as debugging support for Node.js. Support for additional languages can be provided by freely available extensions on the VS Code Marketplace.

Instead of a project system, it allows users to open one or more directories, which can then be saved in workspaces for future reuse. This allows it to operate as a language-agnostic code editor for any language.

REFERENCES;

Books:

- Learn Python the Hard Way: 3rd
  Object-Oriented Programming

  Zed A. Shaw
- Automating Boring Stuff with Python – AL SWEIGART
- Python
  Powerful Object-Oriented

  Programming

Websites:

- www.youtube.com
- www.google.com
- https://www.geeksforgeeks.org/
- https://www.javatpoint.com/
- https://github.com/

Faculty Guidelines:

Mohd. Aamir khan(Technical Trainer in GLA University)

GitHub Repository link:

https://github.com/dynoarmy/mini_project_5th_sem