AI_Enabled_Voice_Assistant: Jarvis

Project Overview

Welcome to the AI_Enabled_Voice_Assistant project, also known as Jarvis. This project aims to create a voice-powered chatbot that allows users to interact with their computer using natural speech. Jarvis is built entirely in Python and leverages several libraries to provide its functionality.

Features

- **Voice Command Recognition**: Jarvis uses the Google Speech Recognition Library to convert spoken words into text.
- **File and Folder Operations**: Open files or folders in the current directory based on user commands.
- **Web Browsing**: Launch any website by voice command using the webbrowser library.
- **Terminal Commands**: Execute Windows terminal commands as instructed by the user.
- **LLM Interaction**: Use the Gemini API for sophisticated, human-like conversations and responses.
- **Conversation Context**: Maintain and save the context of each conversation in the `Conversations` directory for future reference or training.
- **Response Length Management**: Limit spoken responses to a user-defined length, saving lengthy replies to a file for the user to read later.

Project Phases

Phase 1: Voice Bot Interaction

Developed the basic voice interaction capabilities, enabling Jarvis to understand and respond to user commands.

Phase 2: Feature Development and Hardware Integration (Current Phase)

Implemented advanced features such as terminal commands, LLM interaction, and response length management. Integrated necessary hardware for seamless voice recognition and response generation.

Phase 3: GUI Development (Upcoming Phase)

Plan to develop a graphical user interface to enhance user experience and accessibility.

Getting Started

To get started with Jarvis, you need to have Python installed on your system along with the required libraries. Follow the steps below to set up and run the project:

Prerequisites

- Python 3.x
- Google Speech Recognition Library
- web-browser library
- Gemini API access: Get the API key from the Google AI for Developers – `https://ai.google.dev/gemini-api/docs/api-key`

Installation

1. Clone the repository:

```
git clone url_of_This_repository
cd Jarvis
```

Listing 1: Clone repository and change directory

2. Install the required libraries:

```
pip install -r requirements.txt
```

Usage

1. Run the main script:

```
python main.py
```

2. Speak your command clearly after the prompt and Jarvis will perform the desired action.

Contributing

Contributions are welcome! Please feel free to submit a Pull Request or open an Issue for any bugs or feature requests.

Contact

Thank you for using Jarvis! We hope this project enhances your productivity and makes your interaction with your computer more intuitive and enjoyable. If you have any questions or feedback, please don't hesitate to reach out.

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