**NIGHTMARE: VOICE COMMAND SYSTEM**

**NIGHTMARE** is a voice command system that allows you to interact with your computer through voice commands. It can perform actions like opening applications (e.g., Notepad, Command Prompt, WhatsApp), reading screen content using Optical Character Recognition (OCR), and more. The system uses voice authentication, natural language processing (NLP), and machine learning to recognize commands.

**Prerequisites**

Before running the program, ensure that you have the following dependencies installed:

1. **Python 3.x** (Make sure you have the correct version installed)
   * Download Python from: [Python.org](https://www.python.org/downloads/)
2. **Required Python Libraries**: You can install the necessary libraries using pip. Open a terminal or command prompt and run the following command:
   * pip install numpy sounddevice wavio librosa sklearn pyttsx3 speechrecognition pytesseract pillow opencv-python
3. **Tesseract OCR**:
   * Install Tesseract OCR to enable text extraction from images (screen content). You can download it from [this link](https://github.com/tesseract-ocr/tesseract).
   * After installation, make sure to update the path to the Tesseract executable in your script:

pytesseract.pytesseract.tesseract\_cmd = r'C:\Program Files\Tesseract-OCR\tesseract.exe'

or set environment variable C:\Program Files\Tesseract-OCR\tesseract.exe

* + Adjust the path according to your system's installation location.

1. **Applications**:
   * The system attempts to open certain applications (e.g., WhatsApp, Opera). Ensure these applications are installed and the paths are correctly defined in the code. For example:

subprocess.Popen("C:\\Path\\To\\WhatsApp.exe")

* + Replace "C:\\Path\\To\\WhatsApp.exe" with the actual path to the application on your machine.

1. **SoundDevice Library**:
   * This library requires the appropriate audio drivers. Ensure that your microphone is connected and properly set up.
   * You can adjust the recording duration and sampling rate if necessary.

**How to Use**

1. **Clone the Repository**: Clone this repository to your local machine using Git:

git clone https://github.com/yourusername/nightmare.git

1. **Run the Program**:
   * After cloning the repository, navigate to the project folder in your terminal or command prompt.

Run the Python script nightmare.py: python nightmare.py

* + The program will prompt you to authenticate by saying the correct password ("nightmare"). Once authenticated, it will open the main application window.

1. **Voice Command Interface**:
   * The application will display a button labeled "Listen".
   * Click the button or speak the command after pressing the button to execute different actions like opening applications, reading the screen, etc.
   * Some of the commands you can try include:
     + **Open CMD** or **Open Command Prompt**: Opens the command prompt.
     + **Open File Explorer**: Opens Windows File Explorer.
     + **Open WhatsApp**: Opens WhatsApp (make sure the path is correctly set).
     + **Read Screen**: Reads the content of the screen aloud.
     + **Exit** or **Close the Program**: Closes the application.

**Features**

* **Voice Authentication**: The system verifies the user by voice before allowing access to the main application.
* **Voice Commands**: You can issue various commands to open applications, read the screen aloud, and more.
* **OCR (Screen Reading)**: Uses Tesseract OCR to read and extract text from the screen.
* **Text-to-Speech**: The program responds with spoken feedback to guide the user.

**Troubleshooting**

* **No Sound Output**: Ensure that your audio devices (microphone and speakers) are correctly configured and enabled in your system settings.
* **Tesseract OCR Not Working**: Make sure the Tesseract OCR executable is correctly installed and the path is set correctly in the code (pytesseract.pytesseract.tesseract\_cmd).
* **Application Paths**: If the program cannot open applications like WhatsApp or Opera, check the paths in the script and ensure they point to the correct locations on your system.

**Contributing**

Feel free to fork the repository, make improvements, and submit pull requests. Contributions are always welcome!

**License**

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