Jarvis - AI Voice Assistant

Introduction

Jarvis is a Windows-based AI-powered voice assistant developed in Python. Inspired by Alexa and Google Assistant, it leverages voice commands to perform smart tasks like launching applications, opening websites, playing YouTube videos, fetching real-time weather and news, and holding intelligent conversations using Groq language models.

Key Features

- Wake Word Activation - Listens for the keyword "Jarvis" to activate.
- Speech Recognition & Synthesis - Uses Google Speech Recognition API and pyttsx3 for natural interaction.
- App Launching & Closing - Starts and terminates installed apps by voice.
- Website Access - Opens websites using predefined URLs stored in browser.py.
- YouTube Playback - Plays requested videos via pywhatkit.
- Live Weather Reports - Fetches real-time weather summaries using Groq's Compound Beta model.
- News Headlines - Retrieves and reads top U.S. news using NewsAPI.
- Conversational AI - Provides intelligent replies using Groq's LLaMA model.

Tech Stack

Voice Input   : speech_recognition (Google)

Voice Output   : pyttsx3

AI Integration   : Groq API (LLaMA, Compound Beta)

App & Web Control : os, webbrowser, pywhatkit

HTTP Requests   : requests

Custom Logic   : apps.py, browser.py

OS Interaction   : winsound, os (Windows only)

Project Structure

Jarvis/

```
├── main.py            # Core assistant logic
├── apps.py            # Local app paths
├── browser.py          # Mapped website URLs
├── requirements.txt    # Python dependencies
├── beep2.wav           # Wake-up audio signal
└── .env               # Environment variables (API keys)
```

Getting Started

1. Clone the Repository:

   git clone https://github.com/yourusername/jarvis-assistant.git

   cd jarvis-assistant

2. Install Requirements:

   pip install -r requirements.txt

3. Configure Environment Variables (.env):

   ai=your_groq_ai_key

   weather=your_groq_weather_key

   newsapi=your_newsapi_key

4. Run Jarvis:

   python main.py

Sample Voice Commands

"Jarvis" - Activates assistant

"Open YouTube" - Launches YouTube in your browser

"Start Notepad" - Opens Notepad

"Play Believer" - Plays "Believer" on YouTube

"What's the weather?" - Provides live weather report

"News" - Reads top U.S. headlines

"Close Chrome" - Closes Chrome application

Customization Options

- App Paths -> Modify apps.py for your installed software

- Website Links -> Edit browser.py with custom URLs

- Speech Rate -> Adjust in main.py:

  engine.setProperty("rate", 170)

Dependencies

pyttsx3

speechrecognition

requests

pywhatkit

groq

dotenv

Known Limitations

- Works only on Windows (due to os.system and winsound)

- Requires internet for AI, news, weather, and speech recognition

- Wake-word detection has no fallback or confirmation

- beep2.wav must be present in root for wake cue

Author

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Python developer and AI enthusiast passionate about building intelligent automation systems.

Created Jarvis to explore voice-first user interfaces and real-world AI integration.