AI Health Assistant

An AI-powered **Health Assistant** built with **Streamlit, Sentence Transformers, and OpenAI GPT**, designed to help users input symptoms and receive **safe, informational health advice**.

This project demonstrates a hybrid approach:

- **Rule-based lookup** for direct matches from a health dataset
- **Semantic search** using embeddings to find the closest matching symptom
- **GPT-powered responses** when no dataset match is found

⚠️ **Disclaimer**: This assistant is for **educational and informational purposes only**. It does **not replace professional medical advice, diagnosis, or treatment**.

Features

- Symptom lookup from custom dataset (`Health_dataset.csv`)
- Semantic similarity search with **SentenceTransformers**
- AI responses using **OpenAI GPT-3.5** when no dataset match is found
- Streamlit UI with **chat bubbles** for a conversational experience
- Sidebar with **About the App** and **About the Developer**

Tech Stack

- **Python**
- **Streamlit** – Interactive UI
- **SentenceTransformers** – Semantic embeddings
- **scikit-learn** – Cosine similarity for symptom matching
- **OpenAI GPT-3.5** – Fallback chatbot logic

Project Structure

AI-Health-Assistant/

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├── Health_dataset.csv # Symptom, possible_condition, recommended_action

├── app.py # Streamlit app with chatbot UI

├── semantic_test.py # Script for semantic search testing

├── requirements.txt # Dependencies

└── README.md # Documentation

Installation

1. Clone this repo:

```
git clone https://github.com/<your-username>/AI-Health-Assistant.git
cd AI-Health-Assistant
```

2. Install dependencies:

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

3. Add your **OpenAI API Key** in `app.py`:
   openai.api_key = "your_api_key_here"

4. Run the app:
   streamlit run app.py

Example Usage

Streamlit UI:

- Select a quick-access symptom (e.g., *Fever, Cough, Fatigue*)
- Or enter a custom symptom (e.g., *I feel very tired and weak*)
- The bot returns:
  - Possible condition
  - Recommended action
  - AI fallback advice if no match

Semantic Search Test (CLI):

```
print(health_chatbot_semantic("I feel very tired and have no energy"))
print(health_chatbot_semantic("I am overweight"))
```

Future Improvements

- Expand dataset with more symptoms and conditions
- Add **voice input + output**
- Enable **multilingual support**
- Store chat history in a database

About the Developer

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