AI-Based Drug Recommendation System

This is a machine learning-powered web application designed to assist users in identifying possible diseases based on input symptoms and recommending corresponding medications. The project integrates AI with a web interface to provide an intuitive, educational healthcare experience.

🚀 Features

- - Symptom-based Disease Prediction using a trained SVC model
- - Drug Recommendation Engine with basic medicine suggestions
- - Voice Input Support via Web Speech API
- - Responsive Web Interface using HTML, CSS, Bootstrap, and JavaScript
- - Machine Learning Backend using Flask, scikit-learn, Pandas, and NumPy

🧰 Technologies Used

Technologies: Python, Flask, scikit-learn (SVC), Pandas, NumPy, HTML, CSS, Bootstrap, JavaScript, Web Speech API, Jinja2, Pickle

⚙️ Installation

- - Clone the repository: git clone https://github.com/your-username/drug-recommendation-system.git
- - Navigate to the project directory: cd drug-recommendation-system
- - Create a virtual environment: python3 -m venv venv
- - Activate the environment:
  - On macOS/Linux: source venv/bin/activate
  - On Windows: venv\Scripts\activate
- **Create a folder named- “templates” and add put all the html files in it.**
- **Create a folder named- “static” and add the image you want to showcase as your logo.**
- - Install required dependencies: check the requirements doc and copy paste them in the command terminal
- - Run the application: python main.py

🎯 Methodology

- - Data Collection & Preprocessing using Pandas.
- - Training a Support Vector Classifier (SVC) for symptom-to-disease prediction.
- - Mapping predicted diseases to recommended drugs.
- - Building a Flask backend to serve predictions and handle logic.
- - Creating a responsive frontend for real-time user interaction and voice input.

📌 Project Highlights

- - Developed an end-to-end AI application integrating ML, web development, and UX design.

- - Achieved accurate symptom-to-disease predictions using scikit-learn.
- - Integrated voice input and a dynamic frontend for improved user engagement.

⚠️ Disclaimer

This project is intended only for educational and demonstration purposes. It is not a certified medical tool and should not be used for diagnosis or treatment. Users should always consult a licensed healthcare provider before taking any medical action.

📬 Contact

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