DATA

.For the AI solution to function effectively, various forms of data must be collected, organized, and applied accurately. These include:

Symptom Data

* User input: users will enter symptoms they are experiencing such as, headache, fever, cough, sore throat and questions which are provided by the user.
* The chatbot uses Natural Language Processing (NLP) to interpret this data and match it with possible health conditions.This natural language input is processed using OpenAI's API to extract structured medical concepts, which are then matched against our medical knowledge base.

Eg: When a user enters “persistent cough and chest tightness,” and the chatbot recognizes patterns related to possible flu, asthma, or bronchitis.It bases the diagnosis to illnesses commonly found in the region.

Medical Knowledge Database

* This is the data that links user symptoms to conditions and the recommended actions. A curated dataset of common illnesses, symptoms, and recommended over-the-counter (OTC) medications.
* Scope & Limits: It is explicitly programmed to avoid diagnosing serious conditions like heart attack, stroke, cancer. For the extreme symptoms, the only recommended action is to immediately seek emergency care or call a doctor.It is specifically for non-emergency, common conditions such as seasonal allergies, common cold, mild skin rashes.
* The medication recommendation is not a prescription. It is limited to general advice or suggestions for Over-The-Counter medications, always then followed by a disclaimer to consult a pharmacist or doctor before use.

Eg:When the user enters symptomatic data like :

* Headache , It automatically has to pick up that it needs to direct link to Paracetamol/Ibuprofenand for Heartburn it looks into Antacids.it should give a variety of options based on the symptoms

Pharmacy Location Data

* Data on local pharmacies, their operating hours, and location.The user's location is obtained via browser GPS with permission from the user or by entering their zip code. We calculate the nearest pharmacies using the API's built-in distance matrix functionality

Eg: If the user is in Vanderbjilpark, the chatbot shows a list or map of nearby pharmacies that are open and possibly have the recommended medication.

User Demographic Data

* The data is origionally saved in the search history of the patient when signed in.The information can either be typed in manually or it can be an anonymous search while they are not logged in.
* Age, gender, and medical history can improve accuracy in recommendations.

Eg: The chatbot may avoid recommending certain medications for children under 12 or pregnant women.

Regulatory & Safety Data

* Data on approved medication guidelines from health authorities like WHO, SAHPRA in South Africa.This ensures that recommendations comply with medical safety standards but that does not mean the recommendations are 100% accurate.