Unthinkable Challenge

Healthcare Symptom Checker

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Github

What Is Our Project?

- AI system identifies health conditions from symptoms
- Guides users before consulting a doctor
- Provides reliable, structured symptom analysis

Problem Statement

- People often misdiagnose themselves using online symptom searches.

- Many users are unaware of how to describe their health properly to AI systems or Google search.

- This incomplete information often leads to misleading or wrong conclusions.

- Additionally, when someone is truly unwell, medical confusion and stress can prevent them from thinking clearly — resulting in inaccurate self-assessment.

- There is a clear need for an AI-driven assistant that simplifies symptom reporting and intelligently interprets incomplete or unclear inputs, helping users decide when to consult a healthcare professional.

Proposed Solution

- Accepts symptoms as input **without requiring the user to type manually** — making it faster and user-friendly.

- Maps the inputs to structured **medical data variables** for accurate analysis.

- Performs a **quick pre-prediction check to detect potential emergencies** before invoking the LLM for detailed disease prediction — **because in critical cases, every second matters.**

- Suggests relevant medical tests and actionable advice based on the predicted condition.

System Architecture

Workflow:

1. User inputs symptoms.
2. Data preprocessing & symptom matching.
3. AI model predicts disease probabilities.
4. System outputs diseases and advices
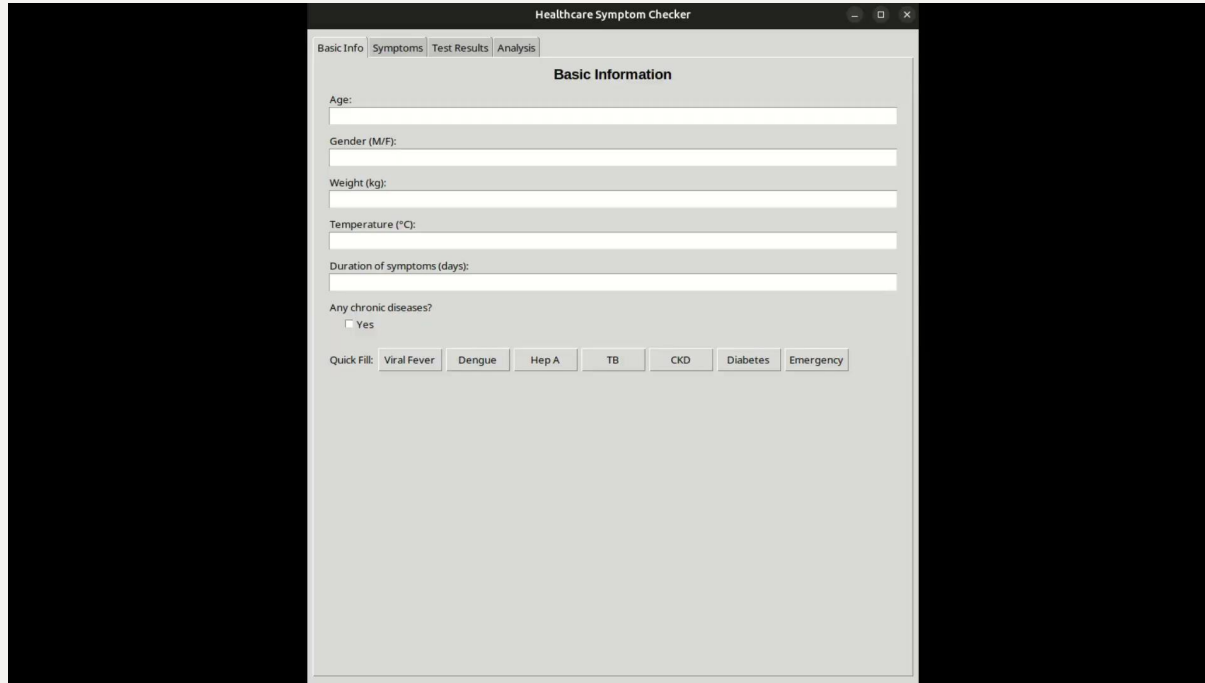5. Internal System Accuracy Checking[Only dev side, this won't be visible to user].

Core Components:

- Input Interface
- AI Engine(hybrid)
- Medical Database (hybrid)
- Output Generator

Technology Stack

Components	Technologies
Language	Python
Framework	Tkinter / Streamlit
Libraries	Pandas, NumPy, Scikit-learn, Markdown
Data	Symptom-Disease Dataset
Deployment	-

Demo Video

Results & Learnings

Results:

- Provides accurate and helpful preliminary diagnosis.
- Enhances user confidence in interpreting symptoms.

Learnings:

- Handling overlapping symptoms.
- Improving disease-symptom mapping.
- Building user-centric healthcare tools.