

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].

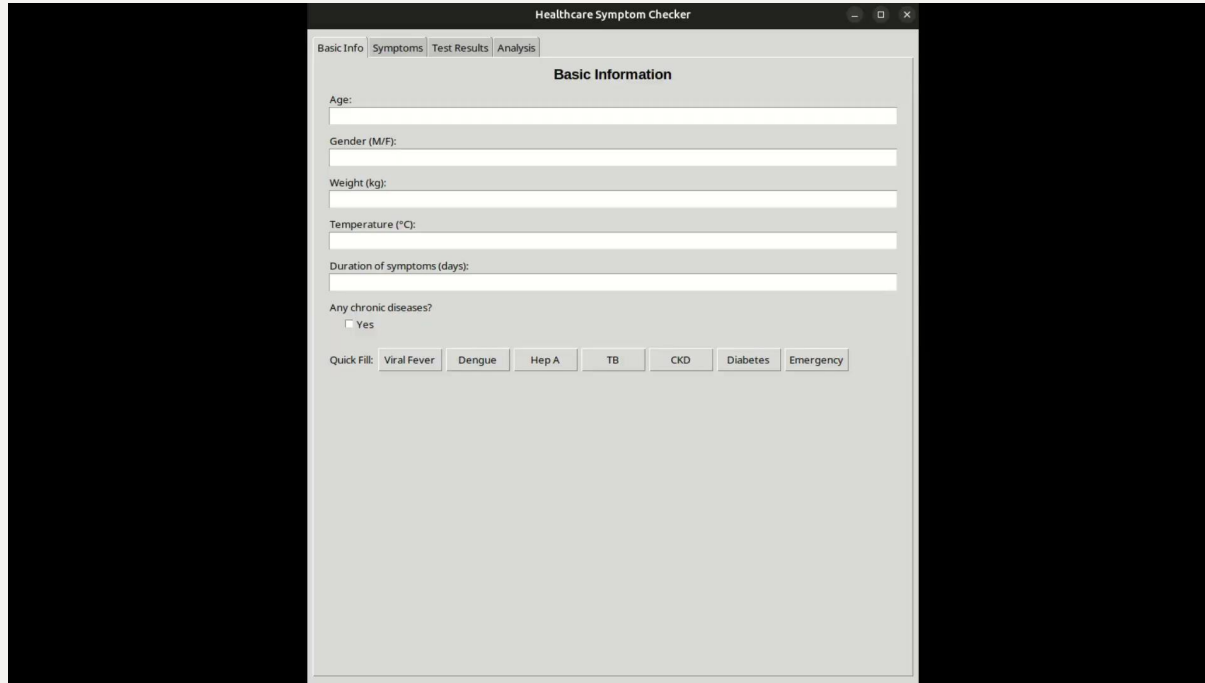
## Core Components:

- 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



The screenshot displays a web application titled "Healthcare Symptom Checker". It features a navigation bar with four tabs: "Basic Info", "Symptoms", "Test Results", and "Analysis". The "Basic Info" tab is currently selected, showing a "Basic Information" form. The form includes input fields for "Age:", "Gender (M/F):", "Weight (kg):", "Temperature (\*C):", and "Duration of symptoms (days):". Below these is a section for "Any chronic diseases?" with a "Yes" checkbox. At the bottom, a "Quick Fill:" section contains buttons for "Viral Fever", "Dengue", "Hep A", "TB", "CKD", "Diabetes", and "Emergency". The application is presented within a window with standard OS controls (minimize, maximize, close) in the top right corner.

Healthcare Symptom Checker

Basic Info Symptoms Test Results Analysis

**Basic Information**

Age:

Gender (M/F):

Weight (kg):

Temperature (\*C):

Duration of symptoms (days):

Any chronic diseases?  
☐ Yes

Quick Fill:

# 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.