RED FLAG

VEDA AI

A Medical Chat

Problem Statement

Access to accurate medication advice is often limited, leading to potential misuse or delayed treatment. This chatbot provides real-time, personalized medicine recommendations based on user symptoms, promoting safer and more informed healthcare decisions.

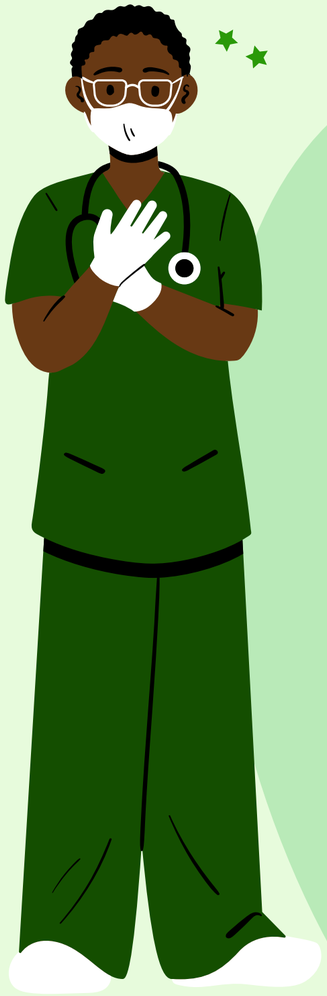
INTRODUCTION

An exploration of innovations in medicine

The rapid innovations in healthcare technology have paved the way for new age solutions that enhance the efficacy of patient care and streamline medical processes. One such advancement is the creation of medical chatbots, designed to assist patients by providing immediate access to health information and tailored suggestions.

This project introduces a new medical chatbot developed using Flask for both the frontend and backend, aimed at recommending relevant medicines and treatments based on particular conditions. The chatbot serves as a virtual assistant, offering users a sort of preliminary guidance on medications while ensuring accessibility, swiftness, and ease in regard to both useability and comprehensiveness.

OBJECTIVE



Enhance Access to Medical Guidance:

The Flask-based chatbot offers a user-friendly interface, allowing individuals to input symptoms and receive reliable medical advice quickly, without needing medical expertise or extensive searching.

Provide Accurate Medication Recommendations:

The chatbot delivers precise medicine suggestions based on user-reported symptoms, ensuring relevant guidance through a robust Flask backend, aligned with standard medical guidelines.

Technology Used

Knowledge Base

Hugging-face transformers pre trained model, Python libraries(scikit-learn, keras, numpy, pandas, seaborn, matplotlib),
Jupyter notebook

Frontend

Flask (for rendering templates), HTML, CSS, Bootstrap and JavaScript (for responsive design).

Backend

Flask (Python) for establishing relation with knowledge base. Database (PostgreSQL/MongoDB for storing user queries and recommendations)

Functional Requirements

Symptom Analysis

Allow users to input symptoms in natural language and identify relevant medical conditions.

Prescription

Suggest appropriate medications with dosage and side effect information based on detected conditions. User Authentication: Support user accounts and track medical query history.

Emergency Warning

Advise users to seek professional help for serious conditions.

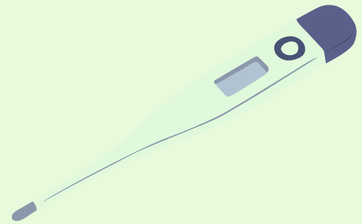
Non-Functional Requirements

Performance

Handle multiple users efficiently and be scalable.

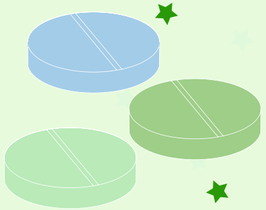
Data Security

Ensure user data privacy and comply with standards like HIPAA or GDPR.



Maintainability

Ensure easy updates and modular, well-documented code.



BENIFITS

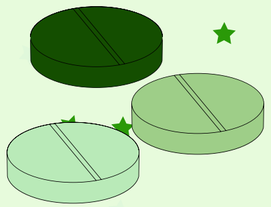
Instant and Accurate Medical Guidance
Provide reliable, real-time medical advice with improved medication accuracy based on user input

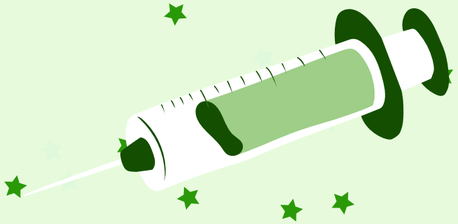
24/7 Accessibility
Ensure round-the-clock access to healthcare guidance, increasing overall accessibility for users.

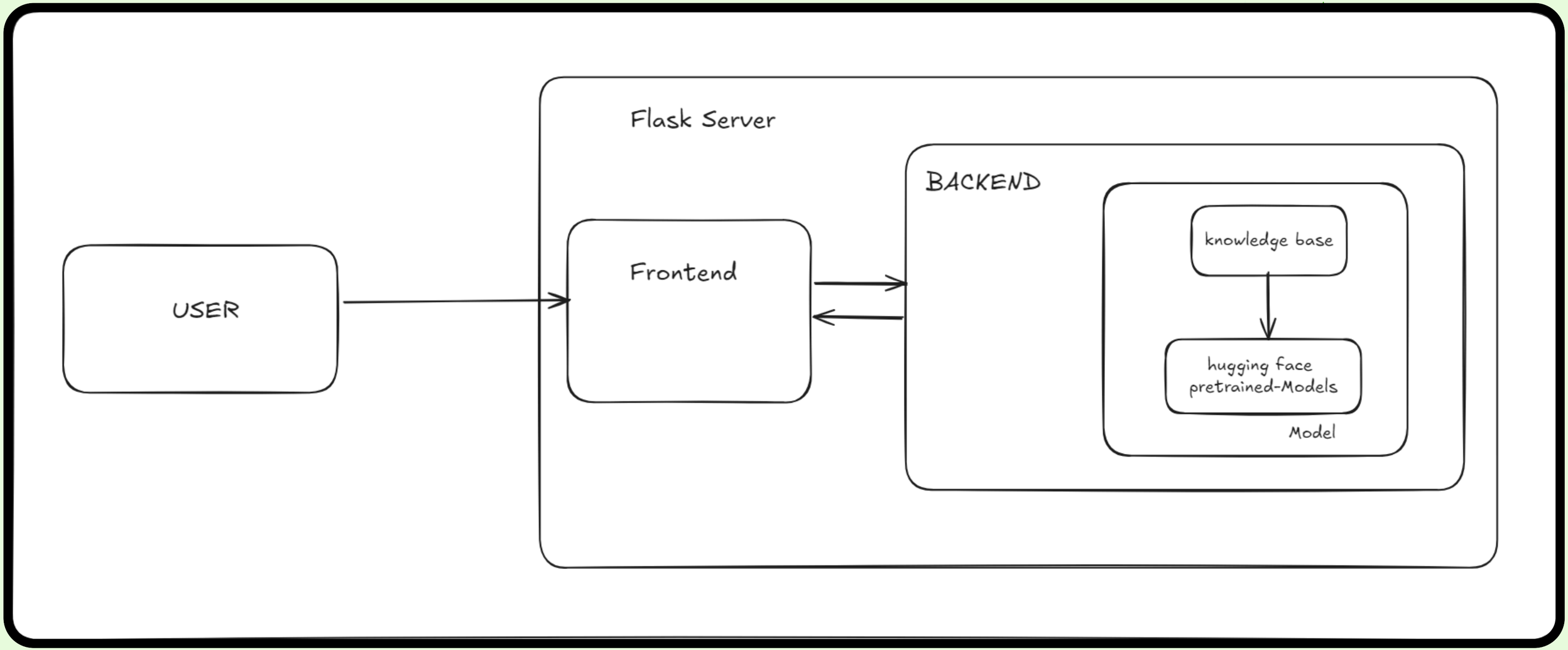
Personalized and Cost-Effective
Offer a tailored user experience while remaining affordable and efficient for both users and developers.

Scalable and Maintainable
Designed for scalability and ease of maintenance, ensuring long-term sustainability of the solution

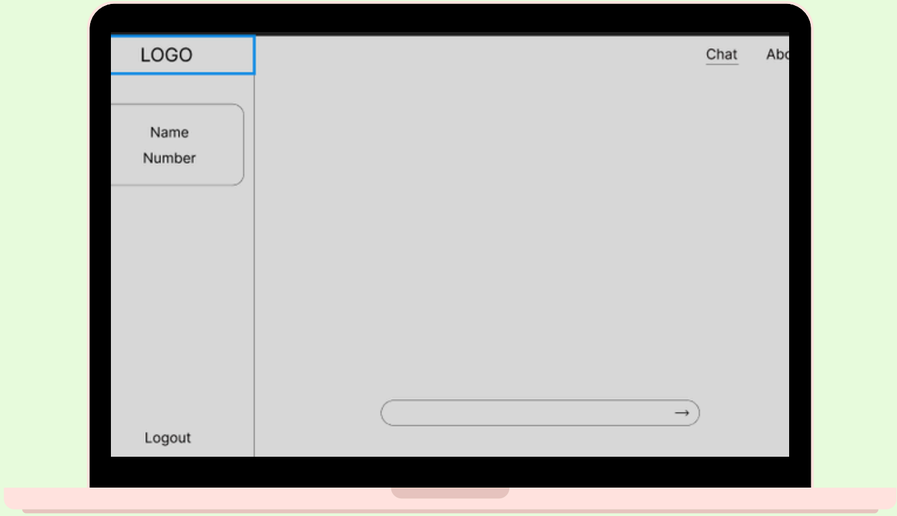
System Architecture





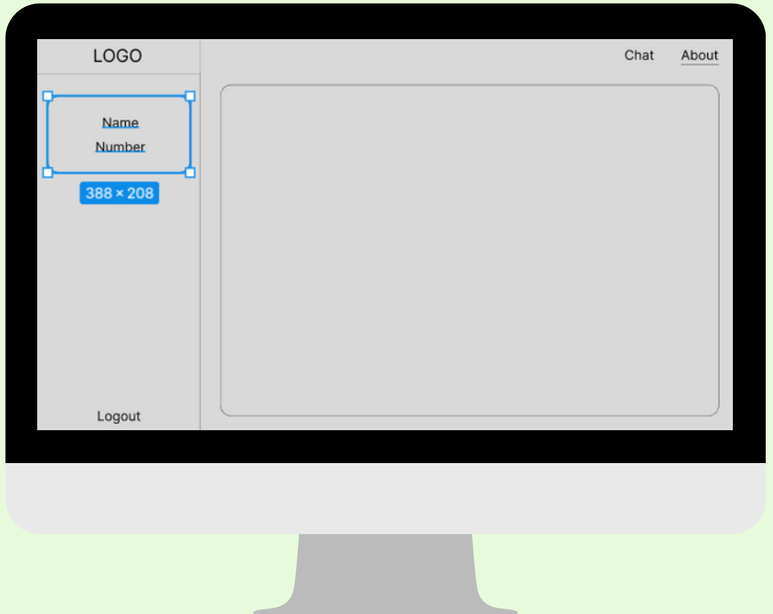


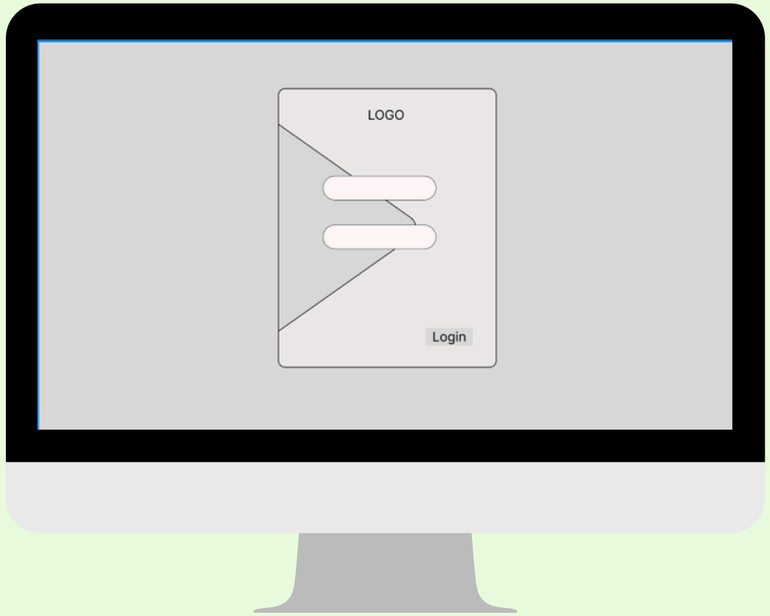
Wireframe



CHAT PAGE

ABOUT PAGE





LOGIN PAGE

Link for Figma File

Our Team

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Thank you for your attention