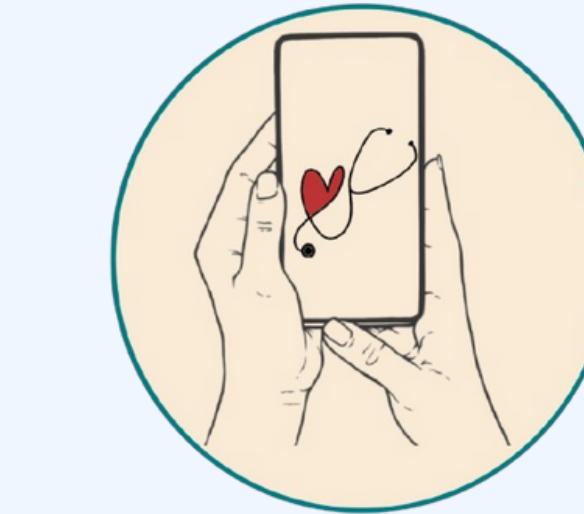


AuraMed – Revolutionizing Hospital Operations & Patient Care

Optimizing Hospital Operations through Patient Flow & Inventory Management Solutions



Team Name : NeuroHack

Team Members:

- 1) Maithili Kumar (Team Leader + UI/UX designer)
- 2) Mahad Iqbal (Frontend + Backend Developer)
- 3) Saptadeep Mitra (Backend Developer)
- 4) Dwaipayan Math (ML Models)

Challenges in the Real World



For Users

📍 Lack of Awareness

Patients struggle to find the right hospital due to limited information on proximity, specialization, affordability, and bed availability.

📊 Unorganized Health Data

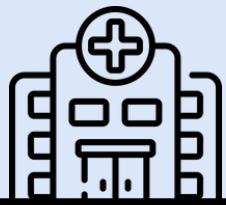
No digital health tracker to monitor health metrics or suggest diagnostics based on past records.

⌚ Difficulties in Appointments & Tests

Booking appointments and tests is time-consuming, requiring physical visits and long queues.

🤕 Symptom Analysis Struggles

Patients find it hard to assess symptoms, leading to wrong doctor choices and delayed treatments.



For Hospitals

📁 Unorganized User Data

Managing large-scale appointments and health records remains inefficient.

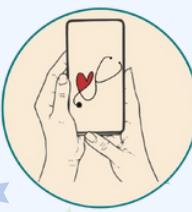
📢 Lack of Reach

New hospitals struggle to attract patients due to low visibility.

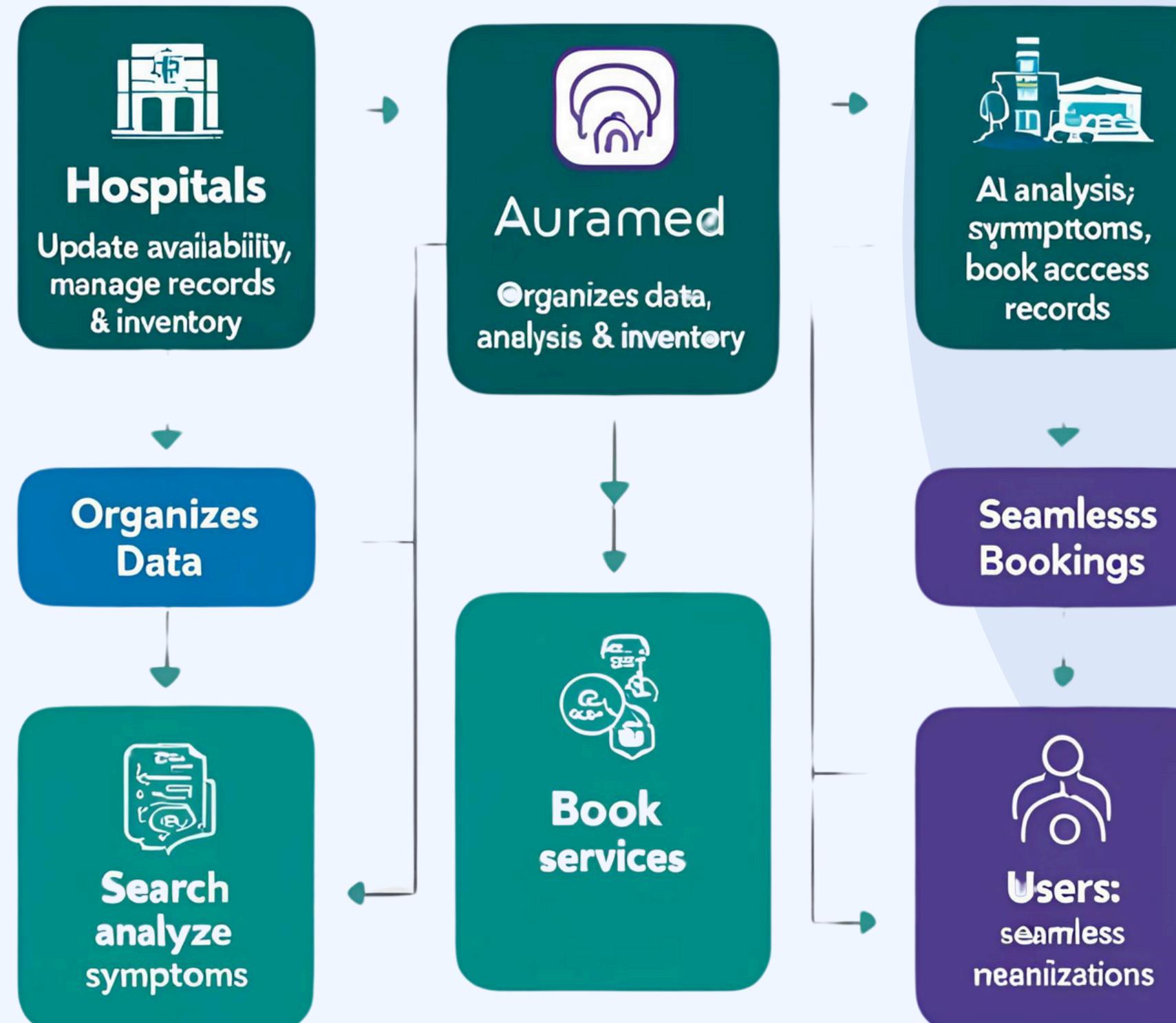
📦 Inventory Management Issues

Tracking medical supplies efficiently remains a challenge without an organized system.





Our Solution – AuraMed



What is AuraMed?

- A comprehensive healthcare management platform improving patient flow and hospital efficiency
- Enables real-time hospital resource tracking & patient appointment management
- Integrates AI-driven diagnostics & smart inventory tracking

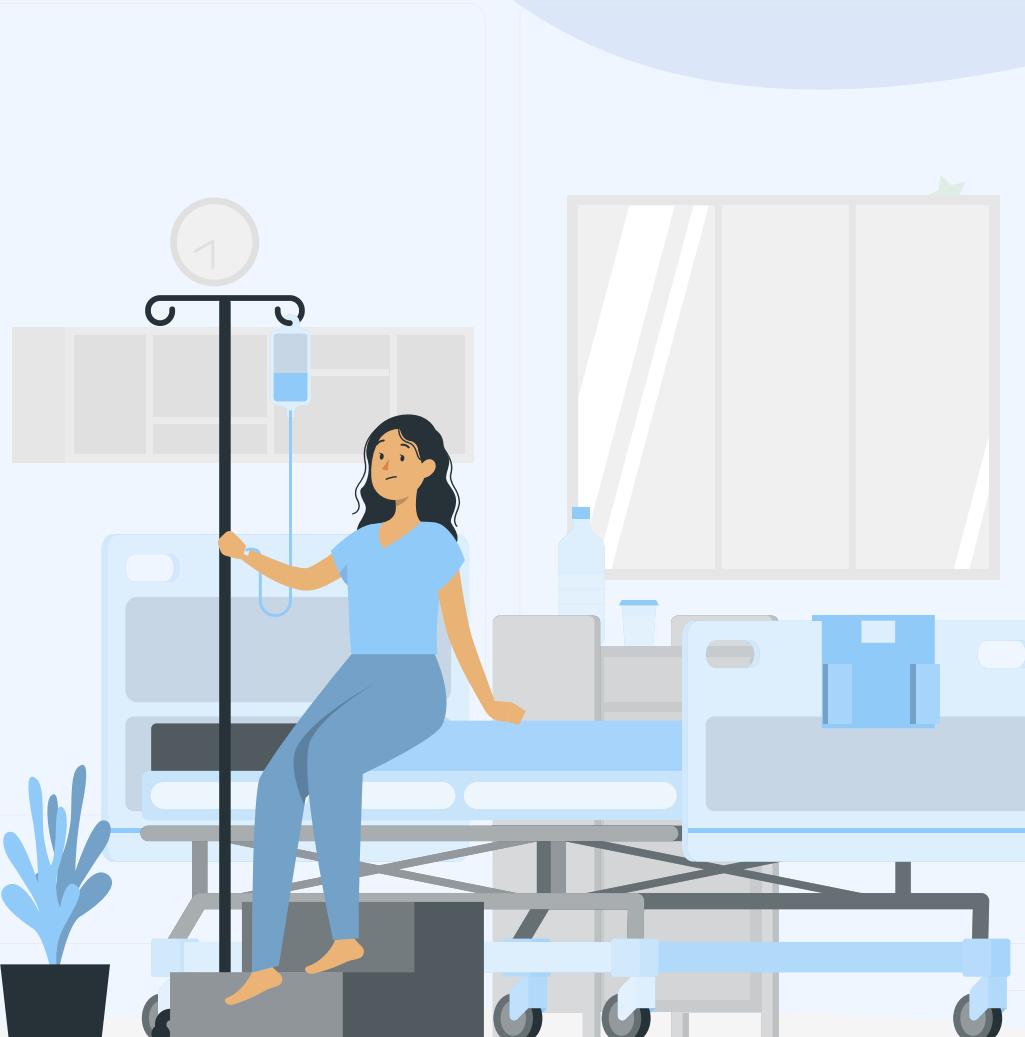
Key Features for Patients



Nearby Hospital Locator (Real-time hospital mapping with OpenStreetMap)



Appointment & Test Booking
(Instant scheduling with live availability)



Bed Availability Tracker (Live updates & emergency booking)



Teleconsultation via Video Call
(WebRTC-based virtual doctor visits)



Chatbot Assistance

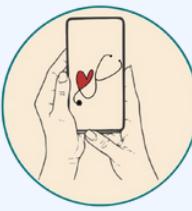


AI-Powered Symptom Checker
(Disease prediction using ML models).

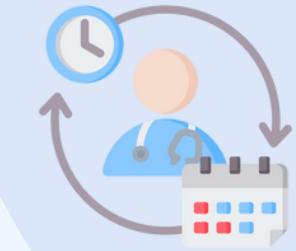


Health Record Management (Digital prescriptions ,reports & health data like bp,sugar level and track of periods for females)

Key Features for Hospitals



Real-Time Doctor & Bed Management (Live status updates)



Appointment & Test Management (Streamlined patient workflow)



Inventory Tracking System (Smart alerts for low stock)



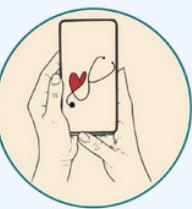
Prescription & Report Uploads (Secure patient medical data storage)



Video Consultation management



Technology Stack



Frontend



HTML



CSS



JS



React.js

Backend



Python-Flask, Flask-CORS, Flask-Pymongo



Node.js & Express.js



Google OAuth 2.0



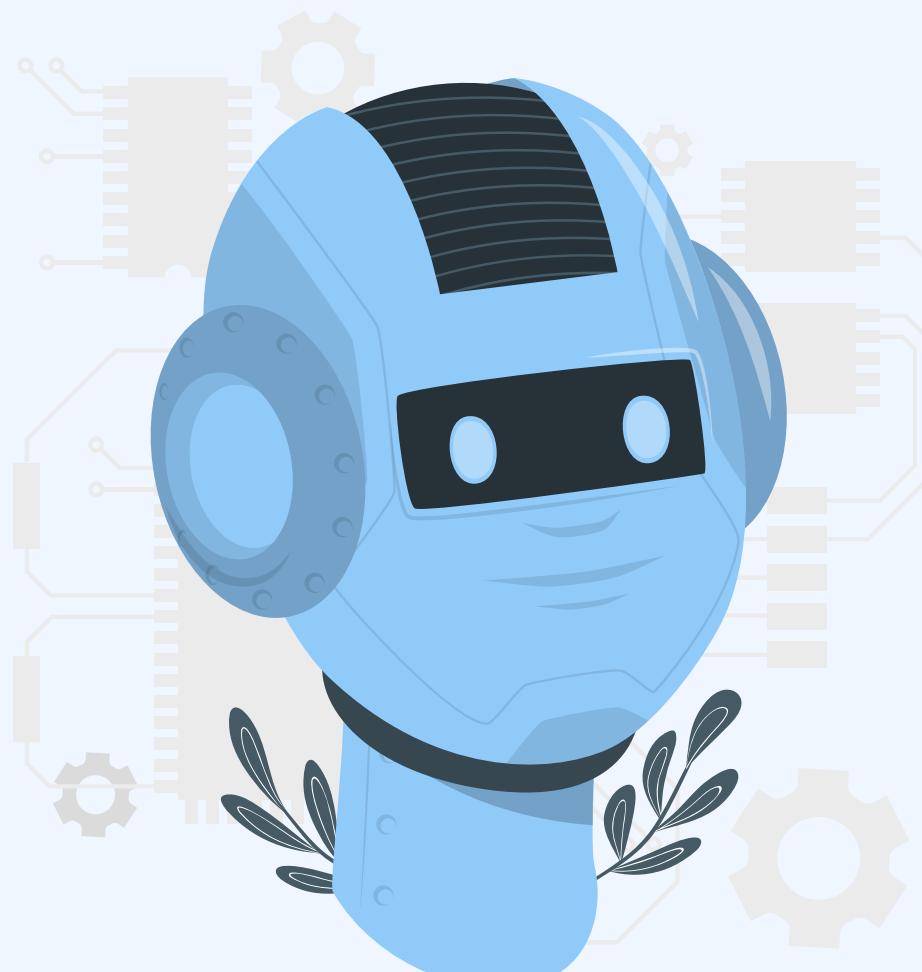
Firebase



SMTP (Simple Mail Transfer Protocol)



APScheduler



Mapping & Geolocation

- Leaflet.js
- OpenStreetMap .
- Google Geocoding API
- Geopy

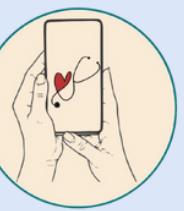
Machine Learning (Disease Prediction & AI Chatbot)

- ◆ Scikit-learn – Implements Random Forest, Naïve Bayes, SVM models.
- ◆ XGBoost .
- ◆ TensorFlow & Keras
- ◆ Dialogflow

Video Call & Real-Time Communication

- React.js
- WebRTC API .
- Socket.io .
- Node.js & Express.js

Impact on Rural and Urban Healthcare System



Rural Healthcare

- Better Inventory Management: Prevents shortages with timely restocking.
- Improved Accessibility: Users check hospital availability from home.
- Emergency Bed Booking: Pre-book beds to reduce admission delays



Urban Healthcare

- Reduced Overcrowding: Smart appointment and bed management.
- Better Access to Care: Video consultations & AI-based symptom analysis.
- Efficient Records & Reminders: Digital health records & automated alerts.
- Optimized Hospital Operations: Real-time resource updates & inventory tracking.
- Faster Emergency Response: Find nearby hospitals & AI chatbot assistance.



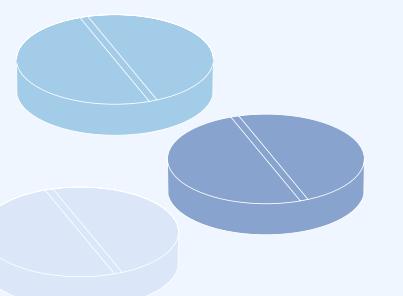
Competitive Advantage

Feature	AuraMed	Practo	1mg	Medlife	DocPrime
Appointment Booking	✓	✓	✗	✓	✓
AI-Powered Symptom Checker	✓	✗	✗	✗	✓
Bed Availability Tracking	✓	✗	✗	✗	✗
Smart Inventory Management	✓	✗	✗	✗	✗
Digital Health Records	✓	✓	✓	✓	✓
Video Consultation (WebRTC)	✓	✓	✓	✗	✓
Chatbot Assistance	✓	✗	✗	✗	✓

AuraMed stands out as an **all-in-one digital healthcare platform**, integrating **appointment booking, AI-driven diagnosis, hospital resource management, and telemedicine**—eliminating the need for multiple apps.

Unlike competitors such as **Practo, Tata 1mg, DocPrime, and Medlife**, which focus on individual services (e.g., appointment booking, medicine delivery, or symptom checking), **AuraMed combines all these essential healthcare functions into a single, seamless platform**.

This holistic approach enhances efficiency, user convenience, and hospital-patient interactions, ensuring a future-ready healthcare ecosystem.



Business Model & Future Prospects



Revenue System

- 📌 Annual Subscription for Users
 - Basic Plan: Discounts on appointment & test bookings.
 - Premium Plan: Includes bed availability tracking & video consultations.
- 📌 Subscription for Hospitals
 - Hospitals can promote their services for greater reach & visibility.

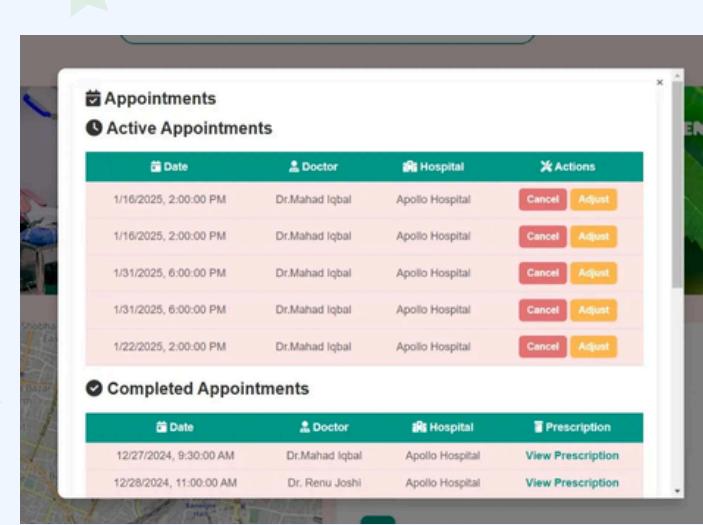
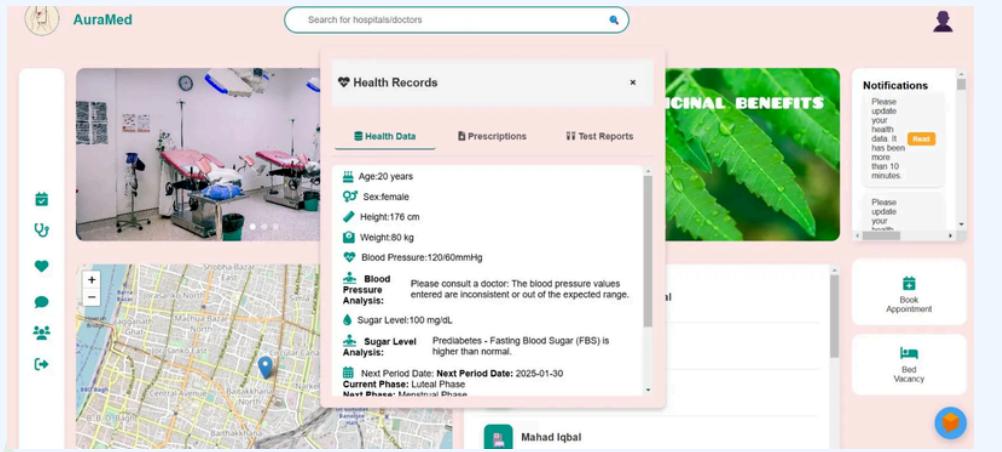
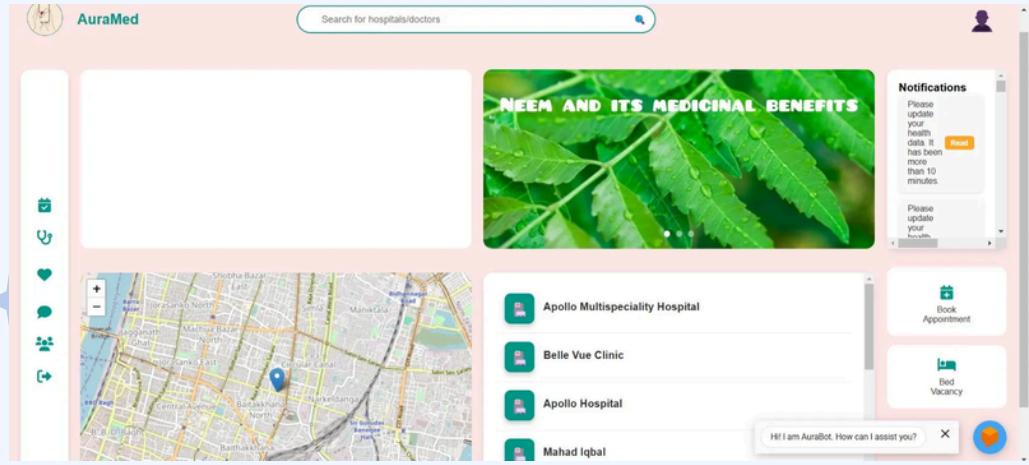


Scalability & Future Prospects

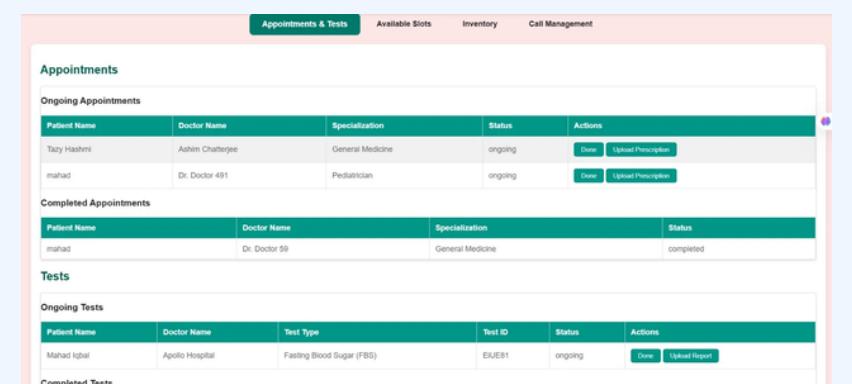
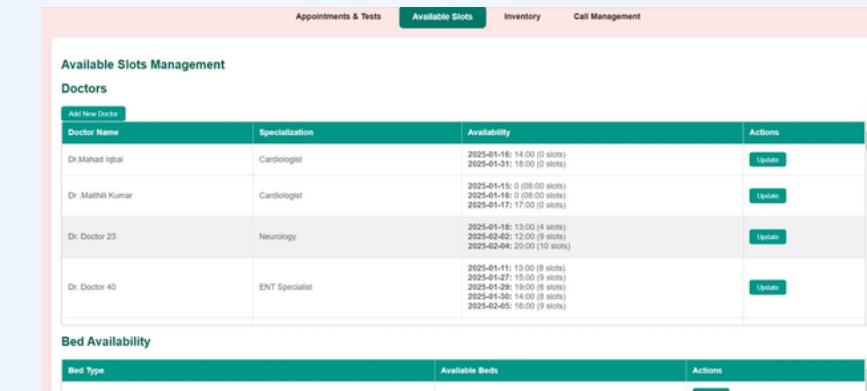
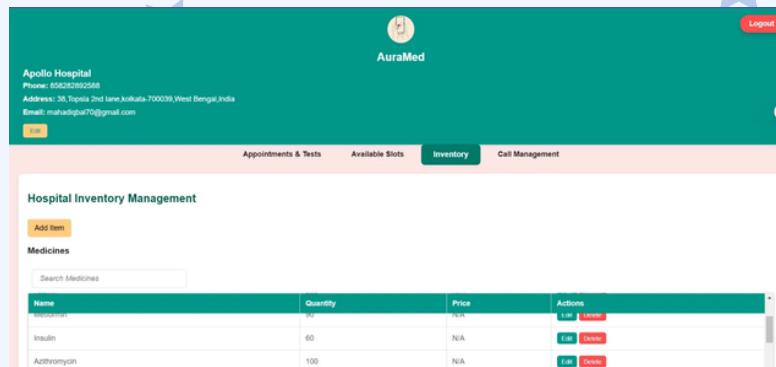
- ◆ **Hospital Onboarding** – Enable hospitals to self-register & update data in real-time.
- ◆ **Advanced Health Monitoring** – Predictive analytics for personalized healthcare & wearable data integration.
- ◆ **Separation of User and Hospital Apps** – Improve stability by creating dedicated applications for users and hospitals.

Prototype

User dashboard



Hospital dashboard



Medicines				
Name	Quantity	Price	Actions	
Paracetamol	120	N/A	<button>Edit</button>	<button>Delete</button>
Aspirin	80	N/A	<button>Edit</button>	<button>Delete</button>
Ibuprofen	150	N/A	<button>Edit</button>	<button>Delete</button>
Aspirin	200	N/A	<button>Edit</button>	<button>Delete</button>
Metformin	90	N/A	<button>Edit</button>	<button>Delete</button>
Insulin	60	N/A	<button>Edit</button>	<button>Delete</button>
Azithromycin	100	N/A	<button>Edit</button>	<button>Delete</button>

Equipment				
Name	Quantity	Price	Actions	
Ventilator	20	N/A	<button>Edit</button>	<button>Delete</button>
ECG Machine	15	N/A	<button>Edit</button>	<button>Delete</button>

"Help us revolutionize healthcare together"



Prototype Status

- ◆ Almost ready, but still working on:
 - Advanced Video Calling – Fix frontend & incoming call management issues.
 - UI Improvements – Refining user experience.

🔗 GitHub Repository: [AuraMed Prototype](#)

🔗 Article on AuraMed: [Comprehensive Healthcare Management Platform](#)

🔗 AuraMed Demo: [Watch the demo here](#)

Key Features for Patients (Updated):

1. SOS Button:

- Records a quick 5-10 seconds voice message that automatically terminates.
- Sends the current location through call and SMS.
- Supports multi-language translation to English.

2. Medicine Reminder through SMS:

- Allows users to schedule reminders for medications.
- Sends daily SMS reminders as per the schedule.

3. Fully Functional Video Call:

- Enhanced teleconsultation feature with seamless video call support.

AuraMed continues to innovate and provide a comprehensive platform for better patient care and hospital