

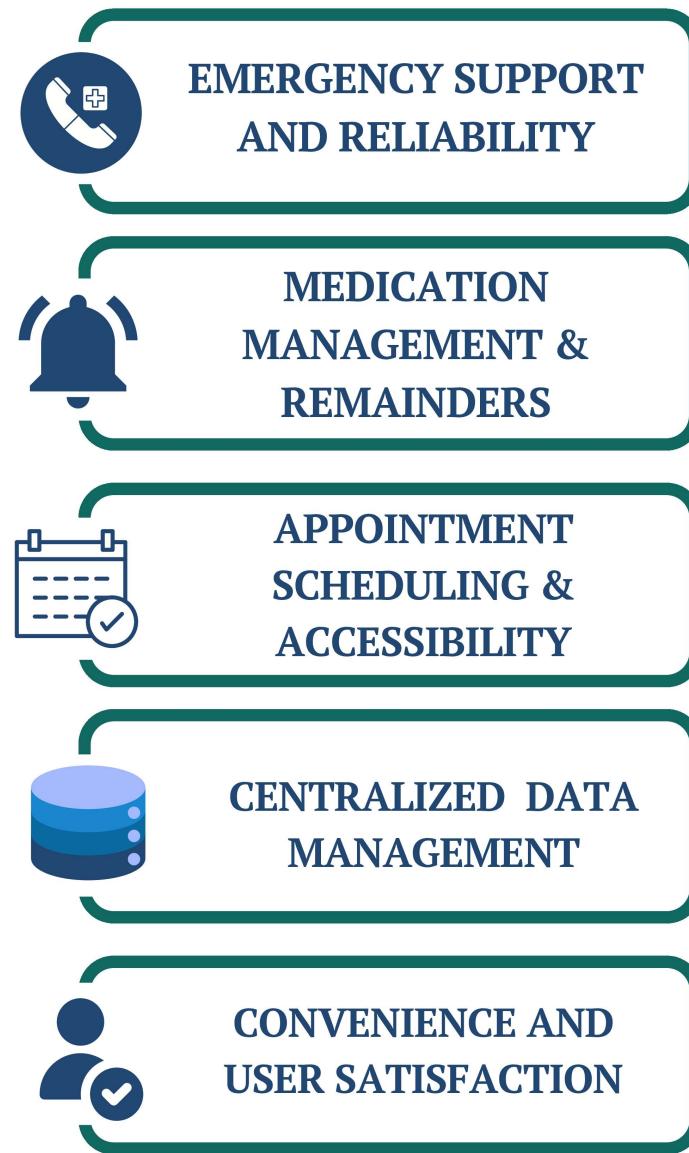
AI - INTEGRATED PATIENT AND HOSPITAL MANAGEMENT SYSTEM



Abstract

The Healthcare Management System enhances patient experience by integrating digital solutions into healthcare services. It offers an intuitive interface for seamless registration, appointment scheduling, and access to medical records, prescriptions, and test results. Key features include medication reminders, emergency assistance, and 24/7 accessibility. By leveraging modern web technologies, the system improves convenience, streamlines processes, and enhances patient care.

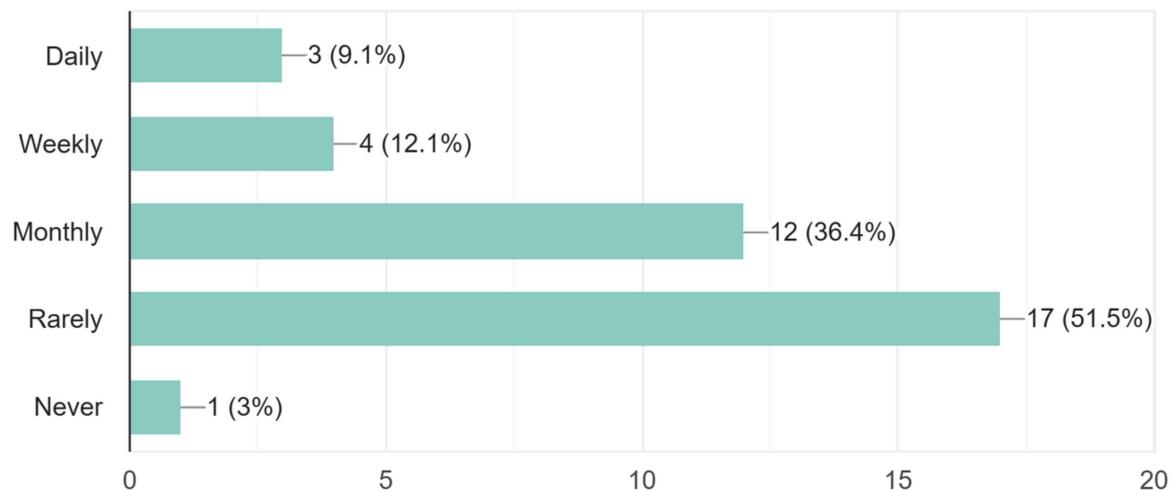
CUSTOMER NEEDS IDENTIFICATION FROM EMPATHY MAP



Product based Survey

How frequently do you use digital healthcare services?

33 responses

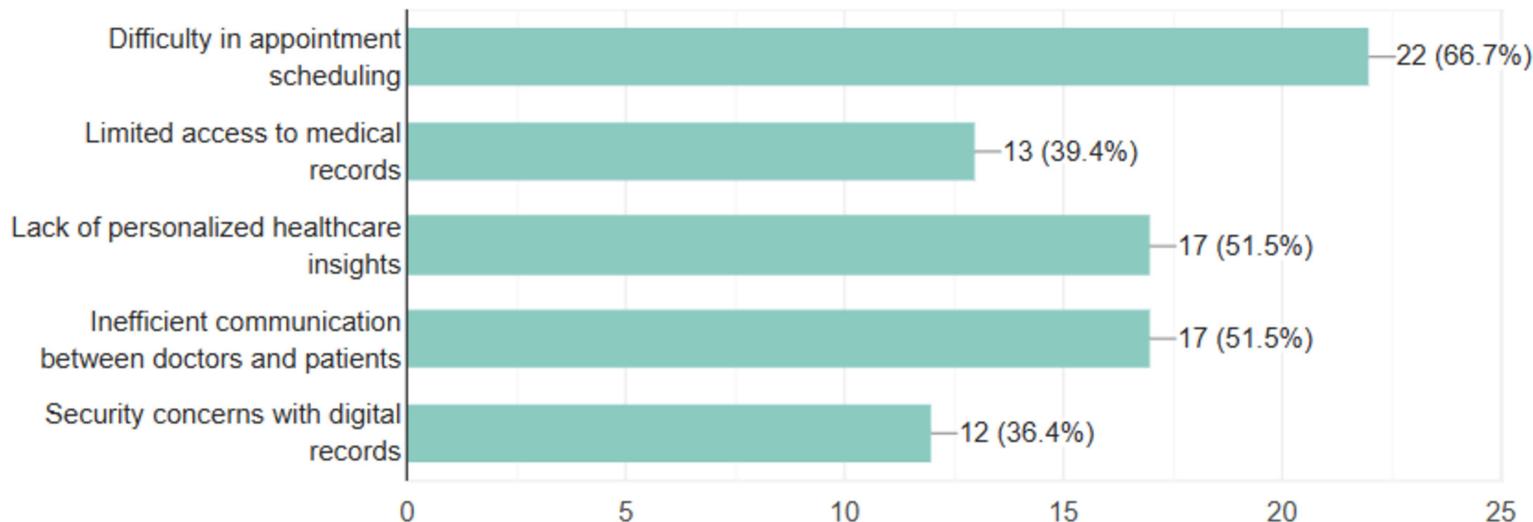


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What challenges do you currently face in healthcare management?

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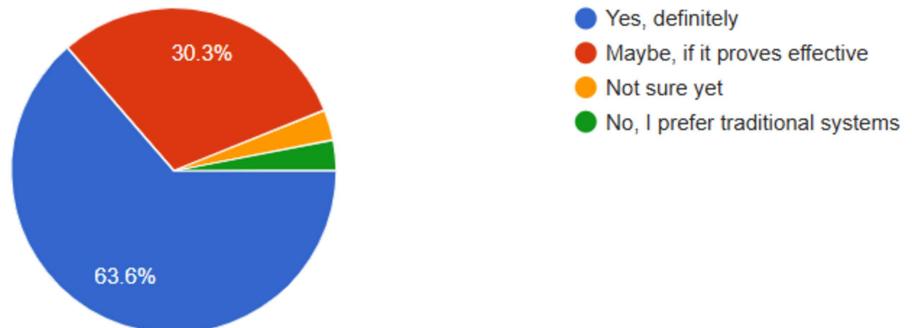
33 responses



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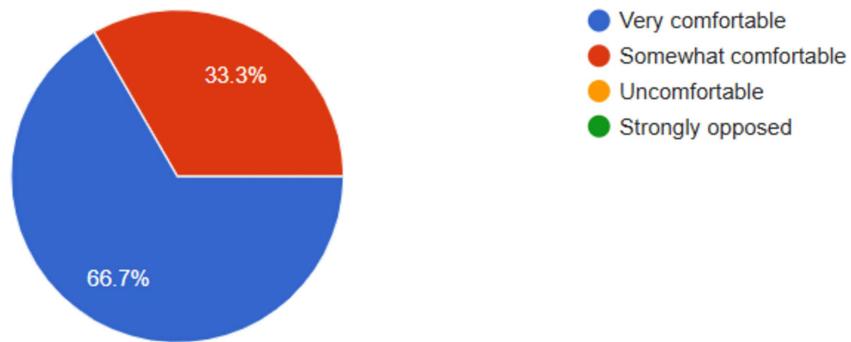
Would you prefer an AI-driven healthcare system like AI in ACC over traditional hospital management systems?

33 responses



How comfortable are you with AI monitoring healthcare services, such as appointment scheduling and medication tracking?

33 responses

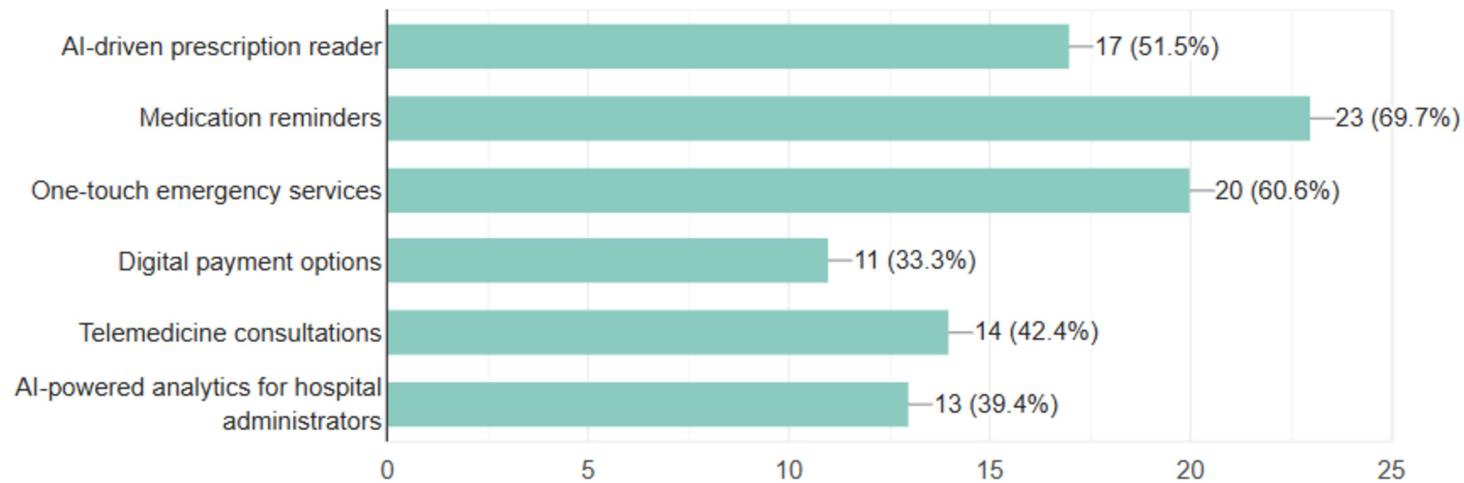


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Which AI-powered features would be most useful to you?

 Copy chart

33 responses

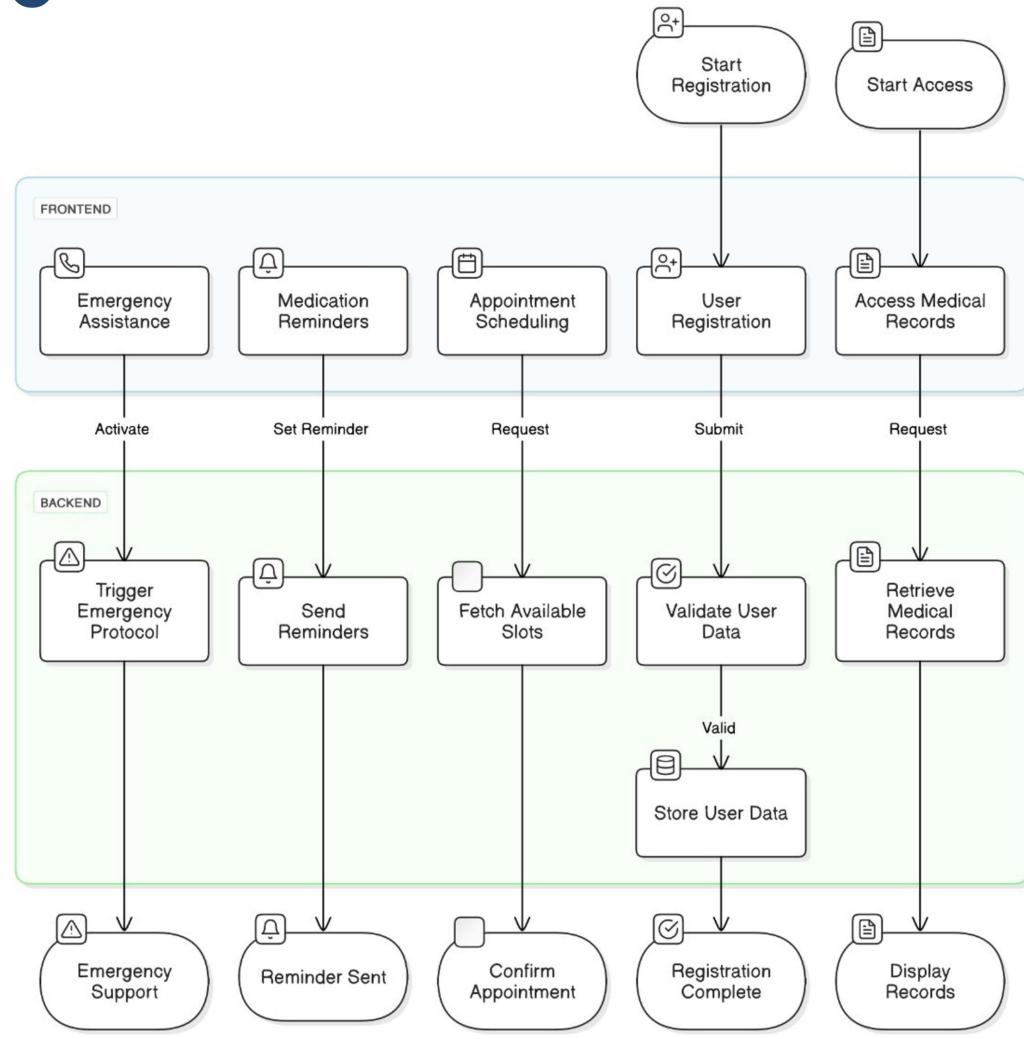


Problem Definition

Patients face several challenges, including:

- Difficulty in booking and managing appointments.
- Limited access to medical records and prescriptions.
- Inability to track medication schedules effectively.
- Lack of immediate support in emergency situations.

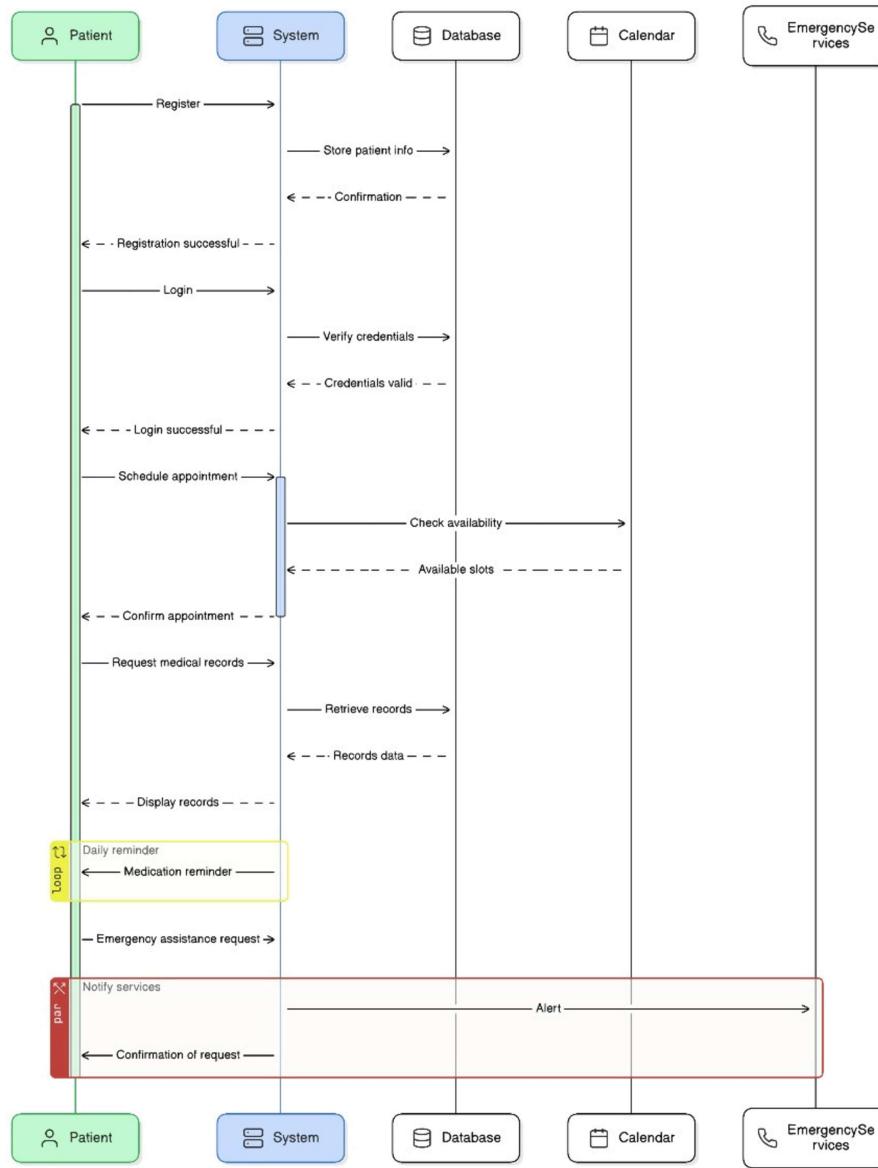
Architecture



Technology Stack

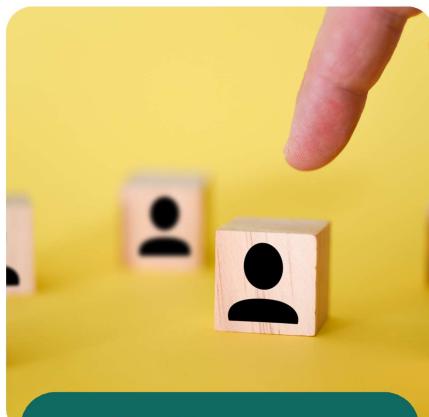
- Frontend: React, CSS, Vite, React Router, Axios.
- Backend: Node.js, Express.js.
- Database: MySQL.
- Authentication: JWT, bcrypt.js.
- Tools: VS Code, Postman, GitHub.

Workflow Diagram



SYSTEM SPECIFICATIONS

Functional Requirements



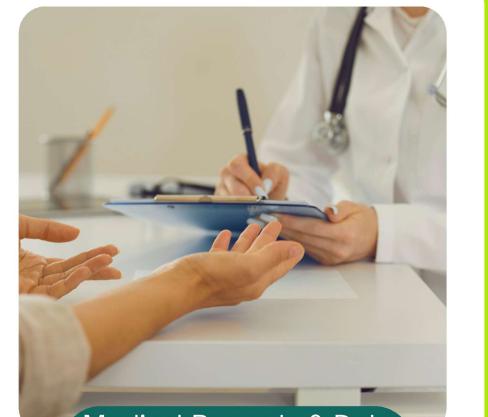
User Management

- Patient registration and Authentication
- Profile Management
- Role based access control



Appointment Management

- Appointment booking
- Appointment tracking
- Automated Reminders



Medical Records & Data Management

- Centralized database
- Data Retrieval
- Data Security
- Data visualization

Cont'd



Medication Management

- Medication remainders
- Dosage and schedule tracking
- Patient can view and manage prescription



Emergency Assistance

- One-touch Emergency support
- Live location sharing



User Experience & Accessibility

- User friendly interface
- Multi platform support

Concept Development

Innovative features:

- AI-powered prescription readers & emergency services.
- Analytics module for medical insights & hospital performance.

Customer needs alignment:

- Priority-based appointment scheduling & telemedicine support.
- AI-driven diagnosis & symptom checker.

Feasibility & Scalability:

- React for a seamless web experience.
- Cloud-based secure storage & encrypted data management.

Welcome to Aruna Cardiac Care

Your health, our priority. We specialize in providing the best cardiac care.

Aruna Cardiac Care is committed to providing exceptional care to our patients. Our team of experts specializes in treating heart diseases and conditions with the latest technology and compassionate care.

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Login

Don't have an account? [Register here](#)

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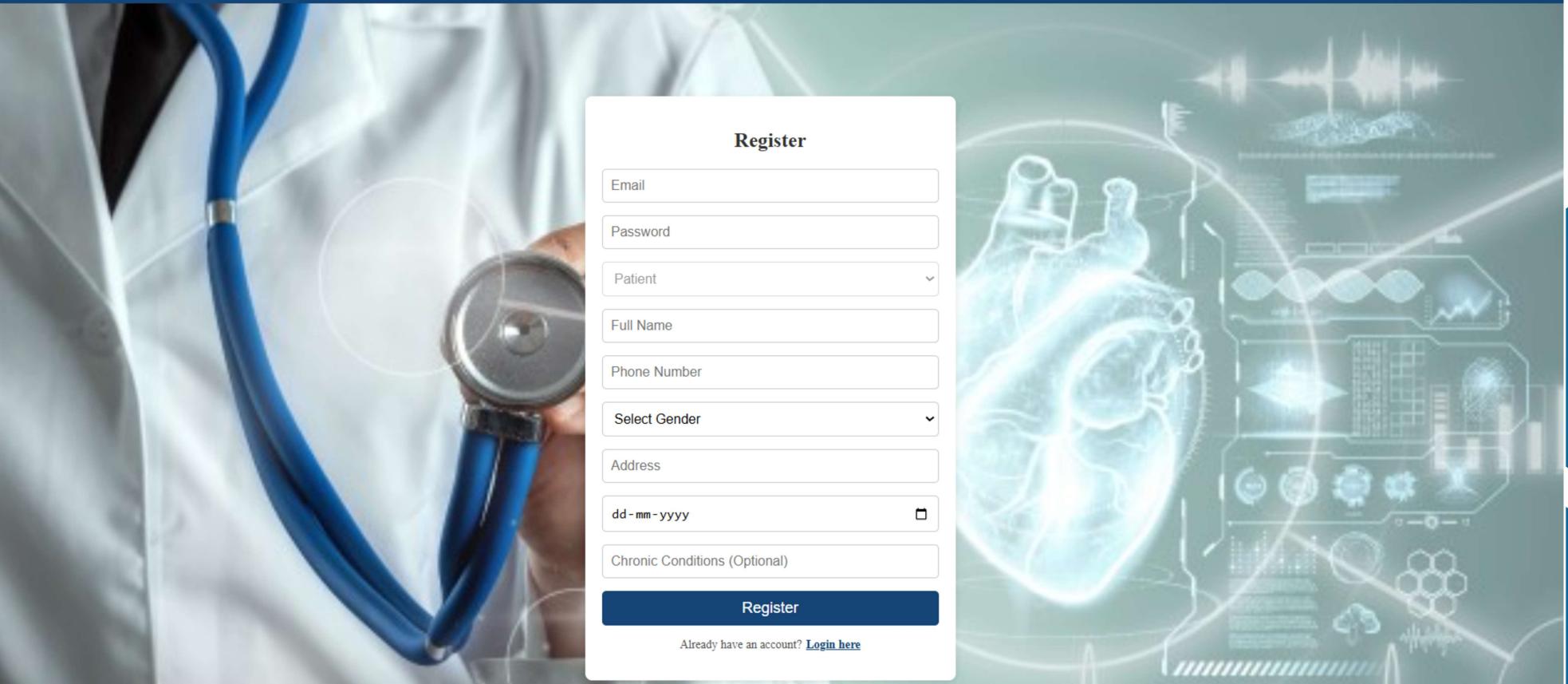
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Register

Email

Password

Patient

Full Name

Phone Number

Select Gender

Address

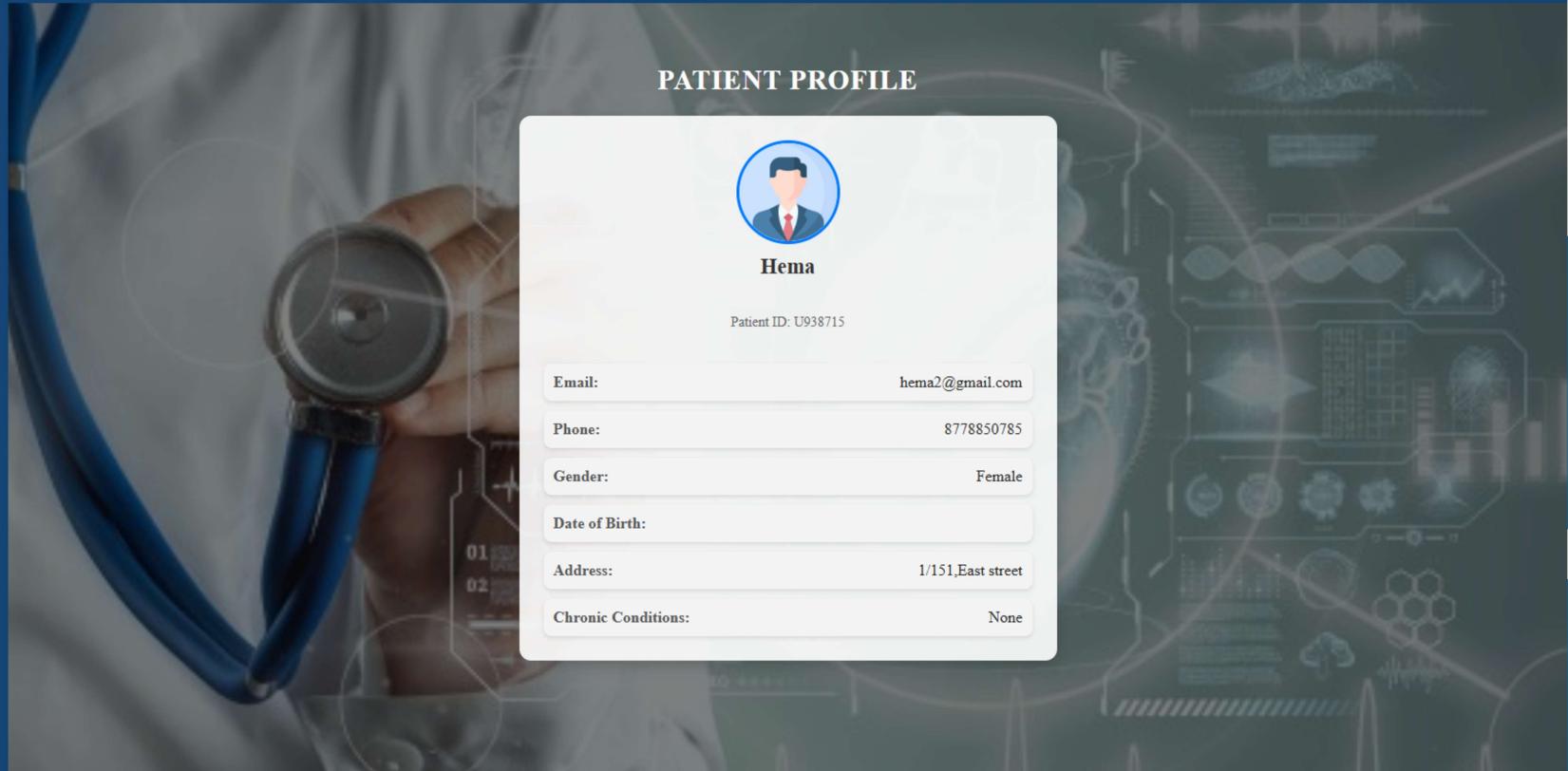
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Chronic Conditions (Optional)

Register

Already have an account? [Login here](#)

Patient Dashboard

[Profile](#)[Book Appointment](#)[View Prescriptions](#)[Lab Reports](#)[My Appointments](#)[Logout](#)

PATIENT PROFILE



Hema

Patient ID: U938715

Email:	hema2@gmail.com
Phone:	8778850785
Gender:	Female
Date of Birth:	
Address:	1/151,East street
Chronic Conditions:	None



Patient Dashboard

[Profile](#)[Book Appointment](#)[View Prescriptions](#)[Lab Reports](#)[My Appointments](#)[Logout](#)

Book an Appointment

Available Doctors

**Dr. Aditi Sharma**[View Slots](#)**Dr. Rajesh Kumar**[View Slots](#)**Dr. Priya Mehta**[View Slots](#)**Dr. Neha Verma**[View Slots](#)**Dr. Arjun Singh**[View Slots](#)

Patient Dashboard

[Profile](#)[Book Appointment](#)[View Prescriptions](#)[Lab Reports](#)[My Appointments](#)[Logout](#)

Doctor's Available Slots

[Back](#)

Wednesday 10:00:00 - 13:00:00	Book Slot
Monday 09:00:00 - 12:00:00	Book Slot
Tuesday 14:00:00 - 17:00:00	Book Slot
Wednesday 10:00:00 - 13:00:00	Book Slot



Your Prescriptions

3/7/2025

Flu and Cold

Doctor: D001

Instructions: Take medications as prescribed and rest well.

Patient Dashboard

Profile

Book Appointment

View Prescriptions

Lab Reports

My Appointments

Logout

Your Prescriptions

3/7/2025

Flu and Cold

Doctor: D001

Instructions: Take medications as prescribed and rest well.

3/7/2025

High Blood Pressure

Doctor: D002

Instructions: Follow a low-salt diet and take medications regularly.

Prescription Details

Diagnosis: Flu and Cold

Doctor: D001

Instructions: Take medications as prescribed and rest well.

Name	Dosage	Before Food	After Food	Morning	Afternoon	Evening	Night
Paracetamol	500mg	✓	✗	✓	✓	✗	✗
Cough Syrup	10ml	✗	✗	✓	✗	✗	✗

Cough Syrup

10ml

✗

✗

✓



Patient Dashboard

[Profile](#)[Book Appointment](#)[View Prescriptions](#)[Lab Reports](#)[My Appointments](#)[Logout](#)

Lab Records

Blood Test

2024-03-05T18:30:00.000Z

[View Details](#)[Download](#)

localhost:5173/patient/lab-reports

Aruna Cardiac Care

HOME ALLD GIN

Patient Dashboard

- Profile
- Book Appointment
- View Prescriptions
- Lab Reports
- My Appointments
- Logout

Lab Records

Blood Test

2024-03-05T18:30:00.000Z

[View Details](#) [Download](#)

This screenshot shows a patient dashboard for 'Aruna Cardiac Care'. The left sidebar, titled 'Patient Dashboard', contains links for Profile, Book Appointment, View Prescriptions, Lab Reports, My Appointments, and Logout. The main content area is titled 'Lab Records' and displays a single entry for a 'Blood Test' conducted on 2024-03-05 at 18:30:00.000Z. There are 'View Details' and 'Download' buttons next to the test information. A file download notification is visible in the top right corner of the browser window.

Patient Dashboard

[Profile](#)[Book Appointment](#)[View Prescriptions](#)[Lab Reports](#)[My Appointments](#)[Logout](#)

Appointment Details

Appointment ID	Doctor Name	Appointment Date	Appointment Time	Status
14	Dr. Priya Mehta	3/12/2025	04:00 PM	Pending
18	Dr. Aditi Sharma	3/12/2025	03:30 PM	Pending
17	Dr. Aditi Sharma	3/11/2025	07:30 PM	Pending
20	Dr. Aditi Sharma	3/11/2025	07:30 PM	Pending
1	Dr. Aditi Sharma	3/10/2025	03:30 PM	Pending
15	Dr. Rajesh Kumar	3/10/2025	01:30 PM	Pending
16	Dr. Aditi Sharma	3/10/2025	02:30 PM	Pending
19	Dr. Aditi Sharma	3/10/2025	02:30 PM	Pending
13	Dr. Rajesh Kumar	3/8/2025	Time not available	Pending
12	Dr. Rajesh Kumar	3/8/2025	Time not available	Pending
11	Dr. Aditi Sharma	3/7/2025	Time not available	Pending

Contact Us

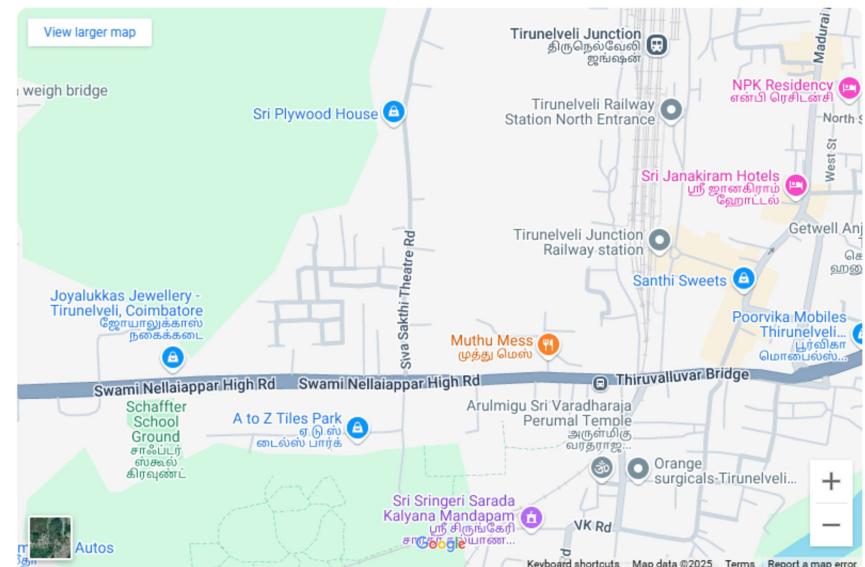
We are here to assist you. Fill in the details below.

Send Message

SOS - Call Now

Our Location

Visit us at Arunac Cardiac Care, Vannarpettai, Tirunelveli.



Medication Reminder – Flu and Cold Treatment

External

Inbox x



HEMALATHA K <hemalatha07022005@gmail.com>

to me ▾

12:51 PM (2 hours ago)



Hi Hema,

This is a gentle reminder to take your prescribed medication for Flu and Cold as advised by Dr. Aditi Sharma (Cardiologist).

Today's Schedule:

Morning : Paracetamol – 500mg

Evening : Paracetamol – 500mg

Doctor's Note : "Take medications as prescribed and rest well."

Please stick to the schedule and reach out if you face any discomfort.

Wishing you a speedy recovery!

Regards,

HMS Team



Your Patient Registration ID

Inbox ×



hemalatha07022005@gmail.com

to me ▾

Hello Hema,

Thank you for registering.

Your Patient ID is: U230113

Please keep it safe for future logins.

Regards,

HMS Team

THANK YOU!!!

