



HackOrbit 2025

404Ninjas

Domain: Healthcare Technology



Problem Statement

Current healthcare systems are fragmented, inefficient, and often not user-friendly for either doctors or patients.

- Patients lack a unified platform to securely store and access their medical records across providers.
- Doctors are burdened with manual tracking, disconnected systems, and information overload.
- There is no well-designed application tailored for doctors to effectively manage patient data and consultations.
- Existing platforms fail to convert scanned medical documents into structured, actionable insights, delaying diagnosis and reducing care efficiency.

Proposed Solution

SwasthiyaLink is a dual-platform application designed for both patients and doctors. It integrates digital medical record storage, appointment booking, health data visualization, and care coordination into a single, secure ecosystem.

Key Highlights:

- Store and share digital health records securely
- Book hospitals and clinics based on real-time availability, facilities, estimated time of arrival, and consultation fees
- Doctors can instantly access medical history using Health ID (ABHA)
- Seamless integration from prescription generation to pharmacy fulfillment
- Built with access to the ABDM (Ayushman Bharat Digital Mission) sandbox, supporting national healthcare interoperability standards

Proposed Solution

The image shows a screenshot of a web application dashboard for 'Swastbiyai.ink'. The dashboard is titled 'Dashboard • Schedule/Patient Tinks/Appointments etc' and displays the date '24 October 2002'. The user is identified as 'Pl. Sinf Light Geneard Decoicy'. The dashboard features several sections: 'Add Patient Info' with a 'GosRimant info' button, 'Get Emergency Info' with a 'GKUI Option' button, 'Total Patients' showing '197', 'Upcoming schedule' with a circular progress indicator for 'Mandor tes 2015', and 'New appointments' with a list of appointments. A 'Tasks' section shows a list of tasks with checkboxes and dates. A sidebar on the left contains navigation links: 'Dashboard', 'Schedule', 'Patients', 'Messages', 'Analytics', 'Manage', 'Finance', 'Settings', 'Support', 'Getting', and 'Support'. A search bar at the top right is labeled 'Search or enter website name'. Annotations with blue lines point to various features: 'Directly Add Patient Info' points to the 'Add Patient Info' section; 'Get Patient's Emergency Info' points to the 'Get Emergency Info' section; 'The Doctor can even manage his Team' points to the 'Manage' link in the sidebar; 'Search Anything' points to the search bar at the top right; and 'Search Anything' points to the 'Search' link in the sidebar.

Directly Add Patient Info

Get Patient's Emergency Info

The Doctor can even manage his Team

Search Anything

Search Anything

Schedule

Analytics

Manage

Finance

Settings

Support

Getting

Support

Dashboard • Schedule/Patient Tinks/Appointments etc

Pl. Sinf Light Geneard Decoicy

24 October 2002

Search or enter website name

Swastbiyai.ink

Dashboard

Schedule

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Settings

Support

Getting

Support

Add Patient Info

Get Emergency Info

Total Patients

Upcoming schedule

New appointments

Tasks

New Tasks >

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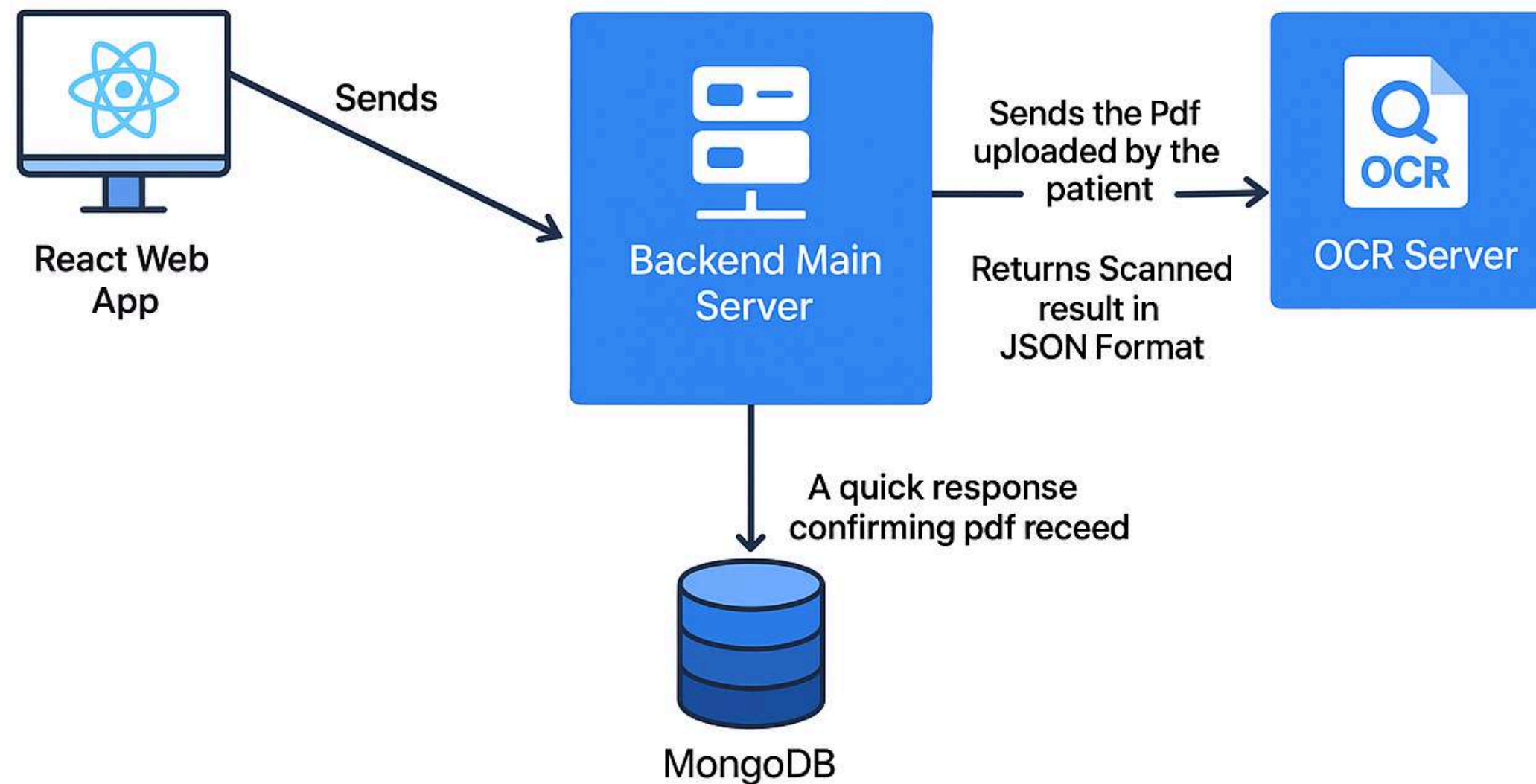
New appointment

New appointment >

FLOWCHART / DIAGRAM

System Architecture

High Level Design

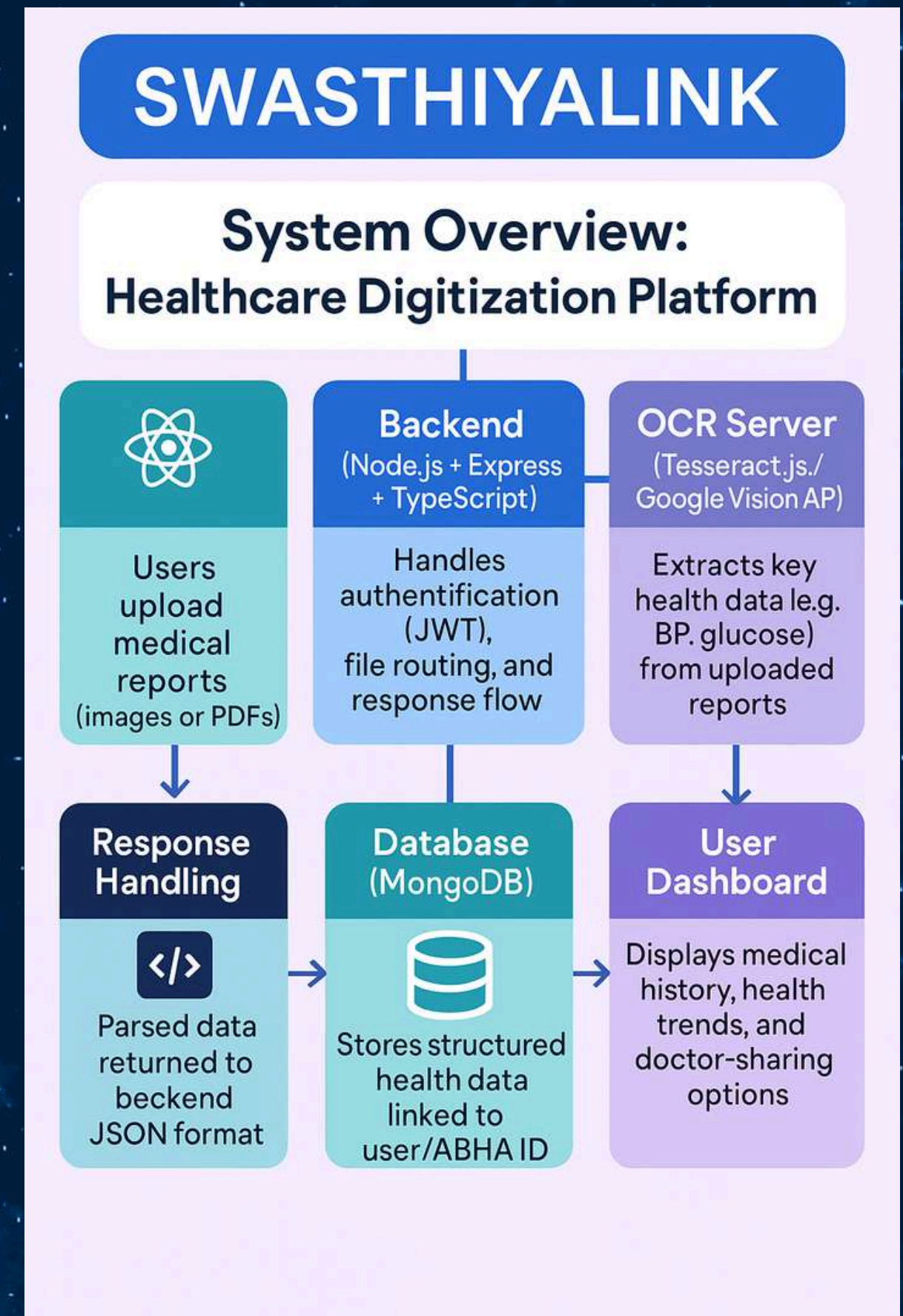


Authorization and Authentication
Layer using JWT Token

FLOWCHART / DIAGRAM

System Overview: Healthcare Digitization Platform

- **Frontend React**
Users upload medical reports (images or PDFs).
- **Backend (Node.js + Express + TypeScript)**
Handles authentication (JWT), file routing, and response flow.
- **OCR Server (Tesseract.js / Google Vision API)**
Extracts key health data (e.g., BP, glucose) from uploaded reports.
- **Response Handling**
Parsed data returned to backend in JSON format.
- **Database (MongoDB)**
Stores structured health data linked to user/ABHA ID.
- **User Dashboard**
Displays medical history, health trends, and doctor-sharing options



FEATURES AND NOVELTY



1. ABHA & UHI Integration

- **Feature:** SwasthiyaLink connects with India's Universal Health Interface (UHI) using ABHA IDs.
- **Innovation:** Enables secure, standardized health data exchange across healthcare providers.

2. OCR-Powered Medical Record Extraction

- **Feature:** Utilizes PaddleOCR to extract structured data from medical reports (PDFs or images).
- **Innovation:** Automates data entry, improves accuracy, and enables instant interpretation of lab results.

3. Comprehensive Diabetes Care Tools

- **Feature:** Tracks food intake, glucose levels, insulin doses, medication schedules, and health trends.
- **Innovation:** Consolidates key diabetes management functions into a single, integrated application.

4. Timeline-Based Health Records

- **Feature:** Displays a chronological view of health records, including lab reports, prescriptions, and clinical interactions.
- **Innovation:** Enhances decision-making by visualizing health progression and identifying trends over time.

DRAWBACK AND SHOWSTOPPERS

1. Limited Accessibility and Reach

The app's impact is limited to users with smartphones and internet connectivity, potentially excluding rural and low-income populations.

2. Language and Cultural Barriers

While multilingual support exists, adapting the app to diverse linguistic and culturally specific healthcare practices remains a significant challenge.

3. Data Privacy and Security Concerns

Despite strong security protocols, risks related to data breaches and ongoing regulatory compliance remain a persistent concern.

4. Reliance on Accurate User Input

The app depends on manual data entry from users, which may introduce errors or inconsistencies due to human oversight.

5. Integration and Maintenance Challenges

Integrating with existing systems such as electronic medical records (EMRs) and ensuring regular maintenance can impact scalability and long-term reliability.

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Thank
you