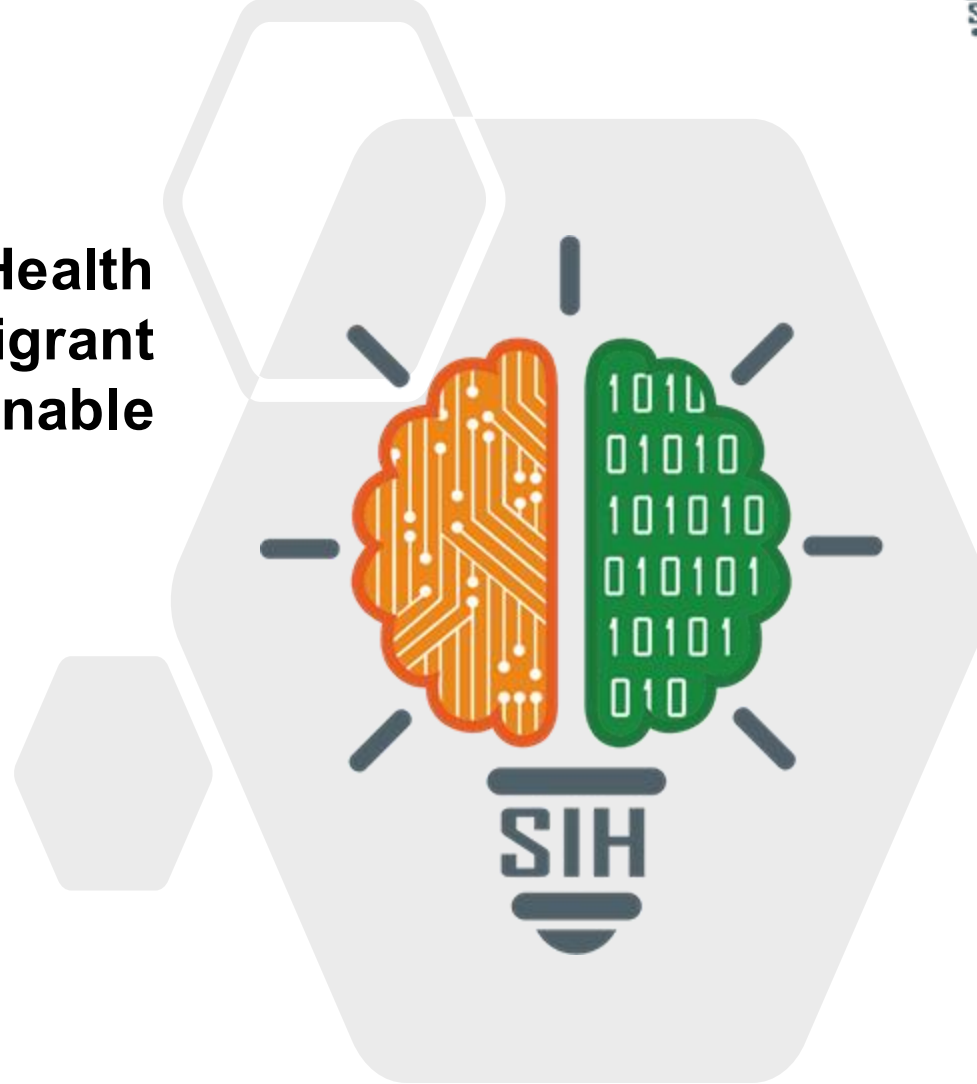


SMART INDIA HACKATHON 2025



- **Problem Statement ID – SIH25083**
- **Problem Statement Title- Digital Health Record Management System for migrant workers in Kerala aligned with sustainable development goals.**
- **Theme- Health tech**
- **PS Category- Software**
- **Team ID- MITADTSW215**
- **Team Name- Healix**

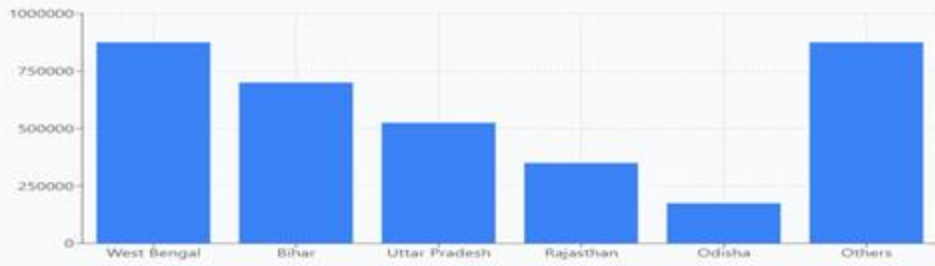


❖ Proposed Solution

Context

- Kerala hosts approximately **3.5 million interstate migrant workers**
- These workers often face challenges such as **poor health literacy**, **limited access to healthcare services**, and **lack of continuity in medical records**

Interstate Migrant Workers by Origin State

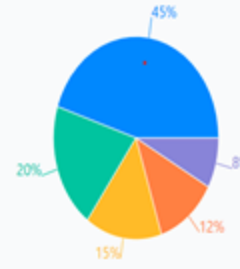


Source: Kerala Migration Survey 2023 - 75% of workers come from 5 northern states

Major Health Access Challenges



Source: Multiple research studies on interstate migrant workers in Kerala 2022-2025



Sectors

- Construction
45% (1,575,000 workers)
- Fisheries
20% (700,000 workers)
- Agriculture
15% (525,000 workers)
- Manufacturing
12% (420,000 workers)
- Others
8% (280,000 workers)

Source: Interstate Migrant Workers study, KILE Kerala 2024

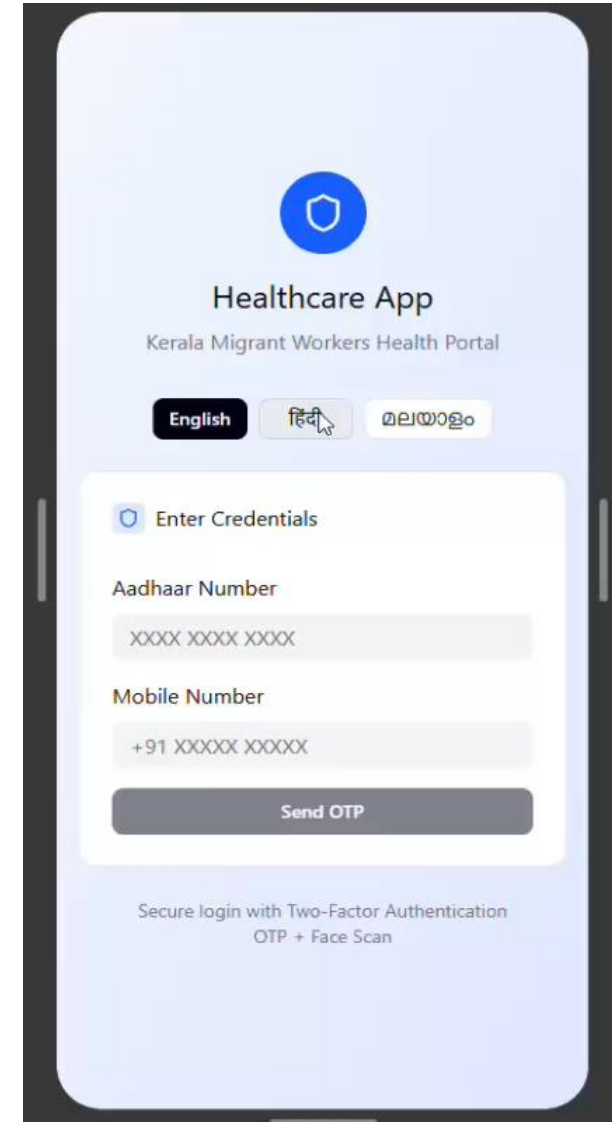
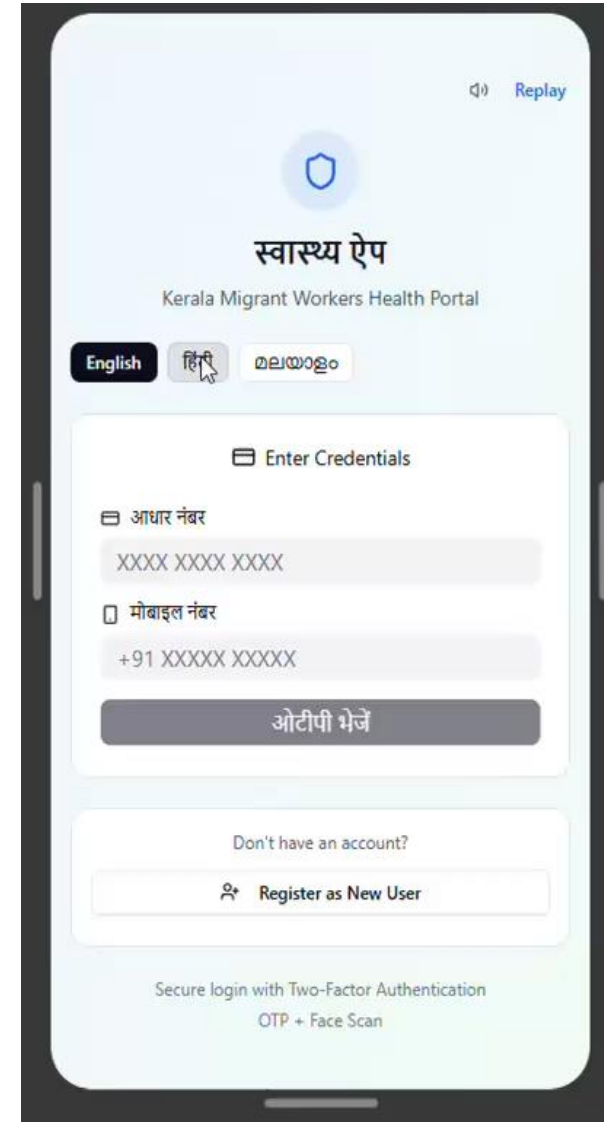
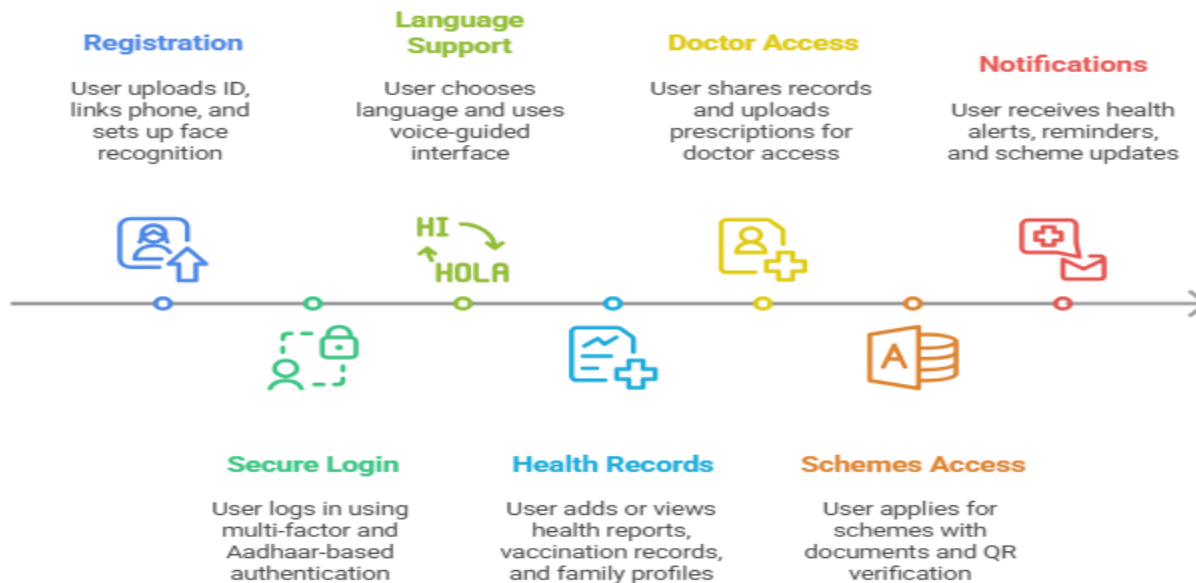
Framework for Inclusive Healthcare



TECHNOLOGIES TO BE USED:-

- **Frontend:** React Native, React.js (cross-platform apps, web)
- **Backend:** Node.js, Express.js, MongoDB
- **Voice & AI:** Coqui TTS, Vosk STT, OpenAI Whisper
- **MFA Authentication:** Aadhar Based Authentication
- **Security:** JWT, end-to-end encryption, Role Based Access Control
- **Cloud:** Docker, Kubernetes, open-source hosting
- **Notifications:** Firebase / SMS Gateway

Healthcare Platform User Journey



FEASIBILITY AND VIABILITY



Future Scope: Health App Enhancements

Appointment Booking



Workers schedule consultations, reducing wait times for healthcare.

Policy Access



Provide info on healthcare schemes, enable direct applications.

Pharmacy Integration



Doctors send prescriptions to pharmacies, monitoring drug usage.

Scaling App Nationally



Expand app to other states, customizing language and programs.

Addressing Key Challenges



Digital Illiteracy

Limits telehealth service utilization



Privacy Concerns

Hinders trust in telehealth



Network Connectivity

Affects access to remote telehealth



Healthcare Adoption

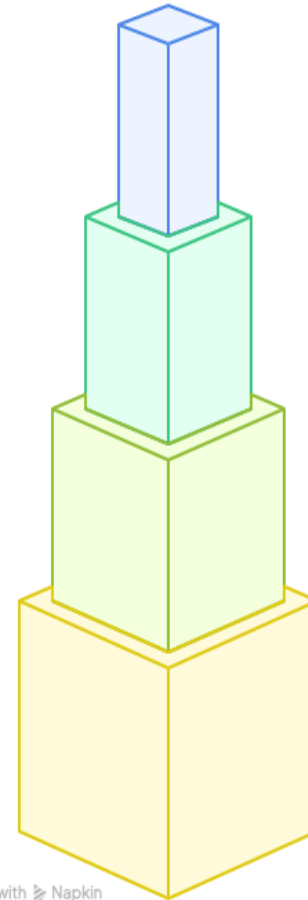
Slows telehealth service integration



Spreading Awareness

Limits understanding of telehealth

Business Analysis (Kerala Govt. Funding Model)



Initial Setup Cost

₹70 Lakhs (software, servers, cybersecurity, training)

Annual Operational Cost

₹30 Lakhs (cloud, staff, maintenance)

Kerala Government Funding

₹1 Crore (Year 1), ₹30 Lakhs/year (Year 2+)

Profit & Justification

Saves ₹5-6 Crores annually, steady revenue, scaling potential

Mitigation Strategies



Accessibility

Voice guidance and offline mode enhance accessibility.

Strong encryption and multi-factor authentication ensure security.

Security



Data Sync

Data synchronizes when online, requiring minimal internet.

Awareness campaigns and training educate users and doctors.

Awareness



Affiliation

Affiliation with the government of Kerala.

DPDP Act, DISHA, and NDHM/ABDM protect data.

Data Protection



Made with Napkin



IMPACT AND BENEFITS



TARGET AUDIENCE IMPACT

3.5M+
Primary Beneficiaries
Interstate Migrant Workers

8M+
Secondary Impact
Family Members & Dependents

15K+
Healthcare Providers
Doctors, Hospitals, Clinics

REACH ACROSS KERALA

75%
FROM 5 STATES

45%
CONSTRUCTION

20%
FISHERIES

15%
AGRICULTURE

85%
NO HEALTH RECORDS

Environmental Benefits

Paper Reduction

60-70%

Carbon Footprint Reduction

15-20%

Digital Adoption Rate

70-80%

Paper Docs Saved

~2M annually

Source: Kerala IT Mission 2023

Economic Benefits

Annual Savings

₹220 Crores

Efficiency Gain

31%

Duplicate Tests Reduction

₹70 Cr

Faster Consultation Savings

₹50 Cr

Preventive Care Savings

₹60 Cr

Admin Efficiency

₹40 Cr

Source: WHO + National Health Accounts + India Digital Health Mission

Social Benefits

Health Access Improvement

40-50%

Treatment Delay Reduction

25-30%

Self-Medication Dependency

↓ 20-25%

Organized Records Gap

↓ from 85% to 35-45%

Source: Kerala Migration Survey + Indian Journal of Public Health

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