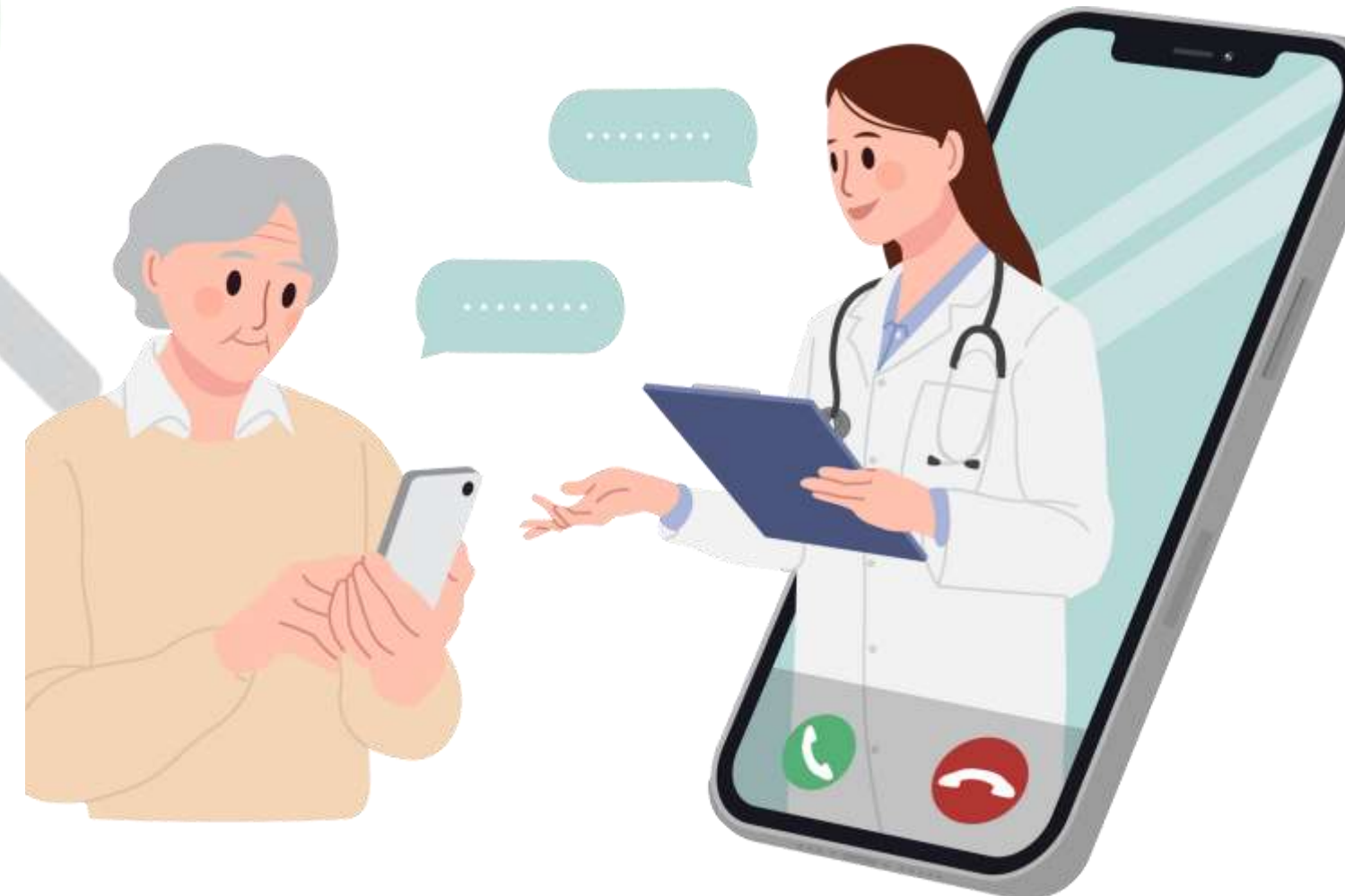


## TITLE PAGE

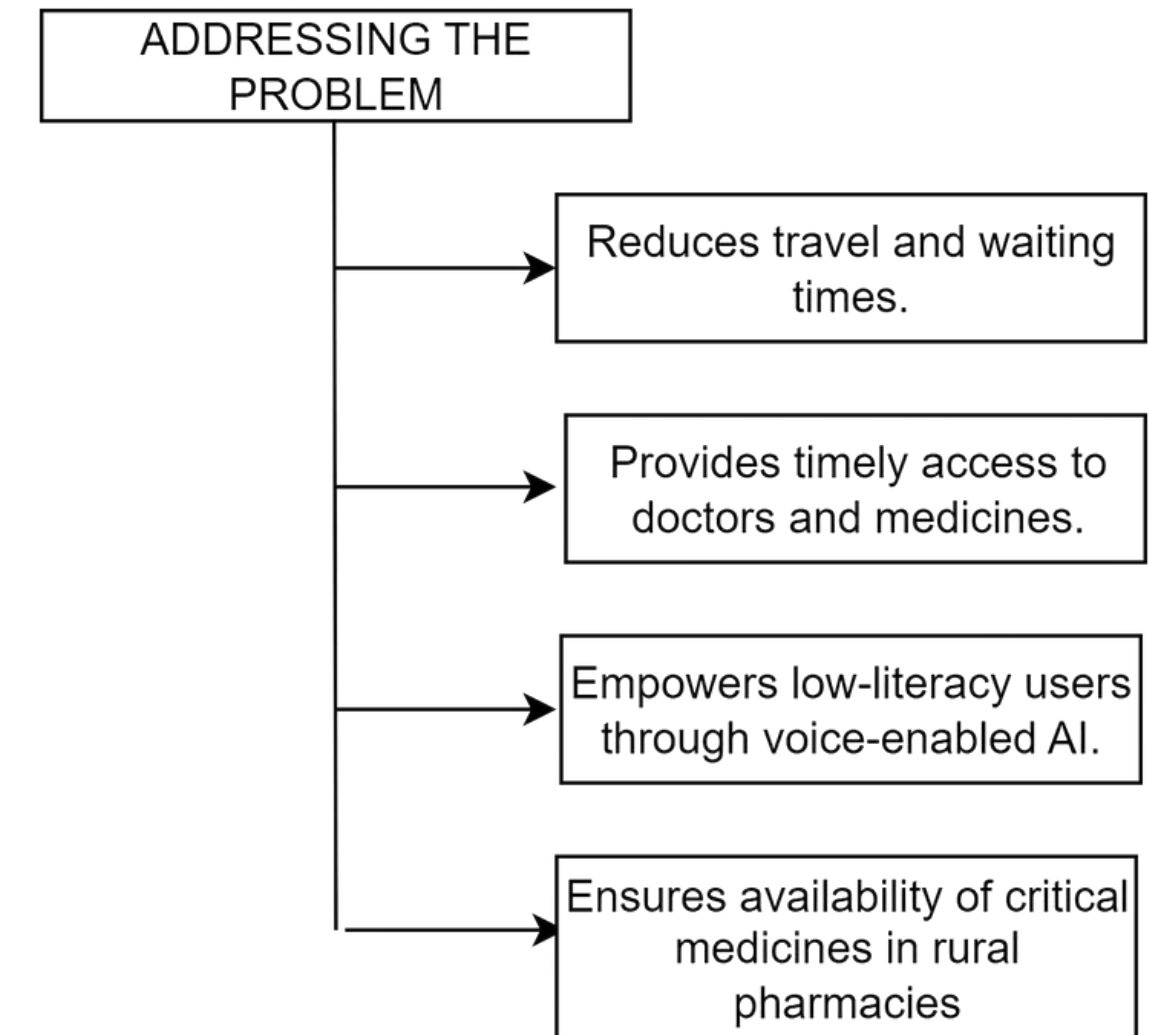
- **Problem Statement ID – 25018**
- **Problem Statement Title - Telemedicine  
Access for Rural Healthcare in Nabha**
- **Theme - Healthcare**
- **PS Category - Software**
- **Team ID -**
- **Team Name - Debug Thugs**



## DETAILED EXPLANATION OF THE PROPOSED SOLUTION

- A multilingual, AI-enabled telemedicine application designed for rural patients in Nabha and surrounding villages.
- Video Consultation with Doctors – Patients can connect with doctors and specialists remotely.
- Multilingual Support – Interfaces and medical advice available in local languages.
- Offline Health Records – Patients' digital records stored securely and accessible without internet.
- Real-time Medicine Stock Updates – Integration with local pharmacies to provide live information on availability of medicines.
- AI Symptom Checker (Chatbot) – Low-bandwidth optimized AI chatbot for preliminary health assessment.
- Voice/Mic Feature in Chatbot – Allows people with low literacy to interact easily using voice commands.
- Scalable Architecture – Solution adaptable for other rural regions across India.

## HOW IT ADDRESSES THE PROBLEM



## INNOVATIONS AND UNIQUENESS

Combines offline accessibility, multilingual support, real-time pharmacy integration, and AI chatbot with mic feature—a rare combination targeting rural healthcare challenges.



## TECHNOLOGIES USED



**Programming**  
Python, Node.js



**AI/ML**

NLP for multilingual  
chatbot & voice recognition



**Cloud**

AWS for secure storage



**Database**

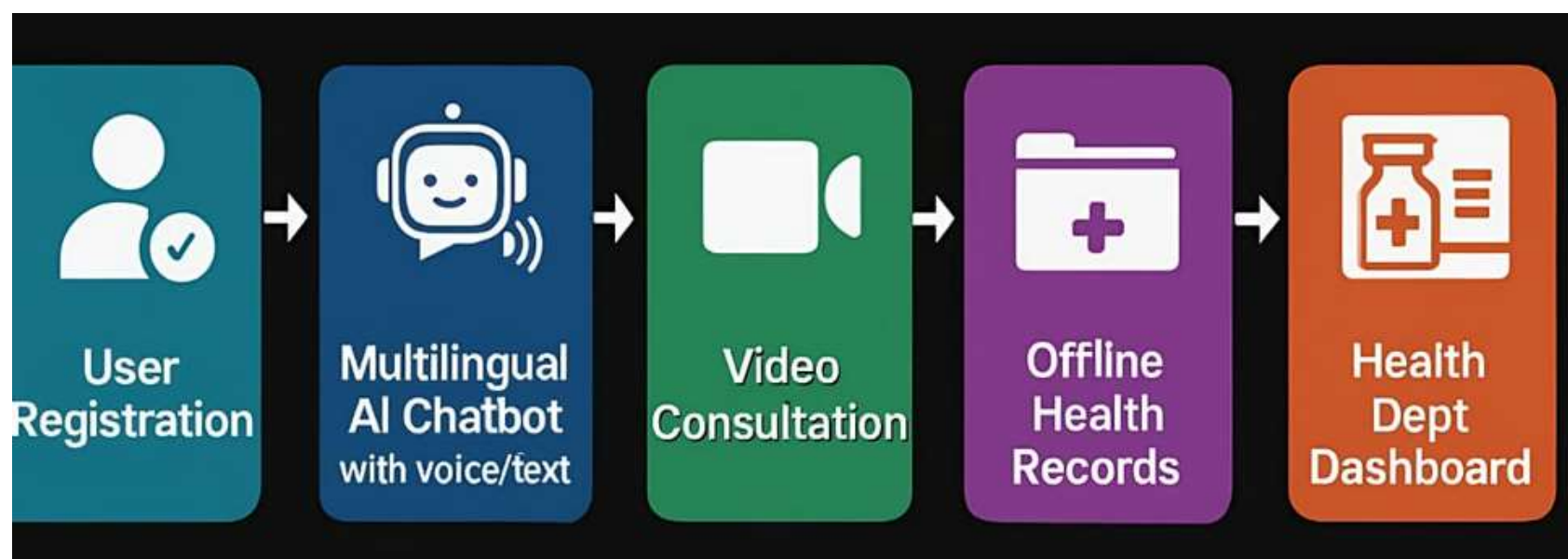
MongoDB



**APIs**

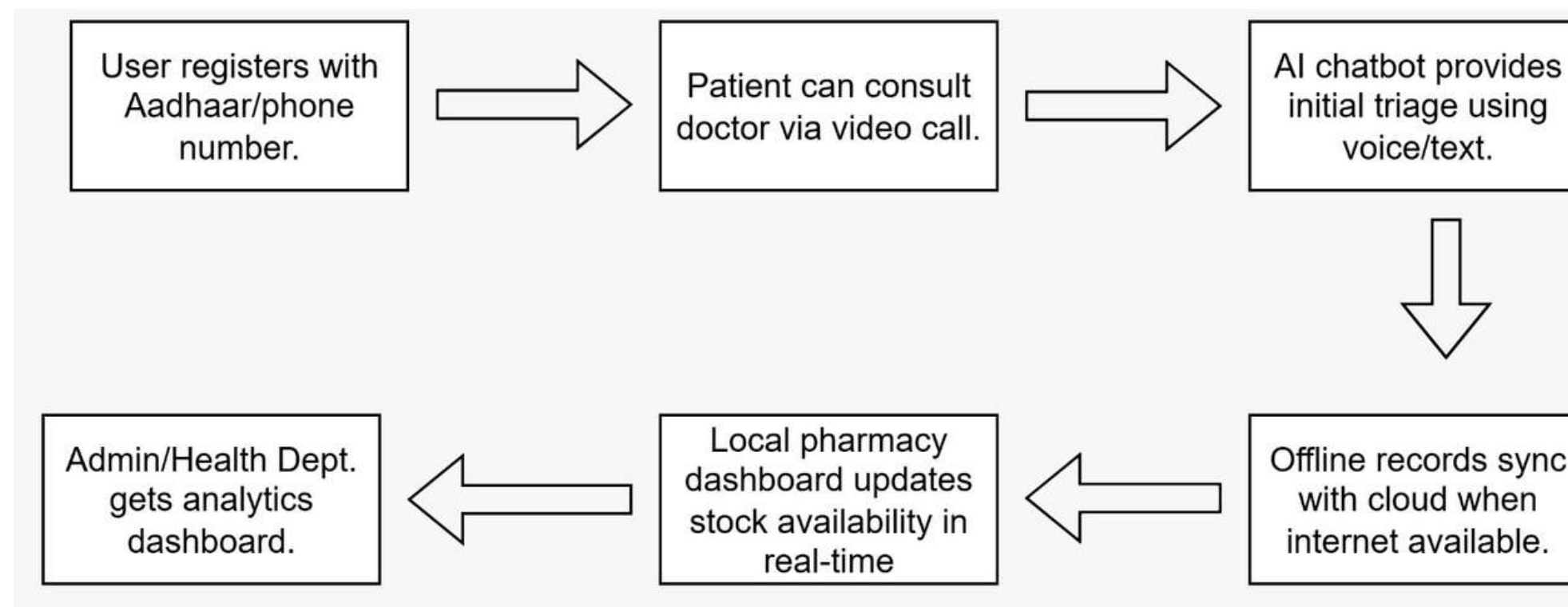
Telemedicine  
with offline sync video API,

## METHODOLOGY



## IMPLEMENTATION PROCESS:

- User registers with Aadhaar/phone number.
- Patient can consult doctor via video call.
- AI chatbot provides initial triage using voice/text.
- Offline records sync with cloud when internet available.
- Local pharmacy dashboard updates stock availability in real-time.
- Admin/Health Dept. gets analytics dashboard.



## FEASIBILITY OF THE IDEA

### 1. Technical Feasibility

AI chatbot with voice support ensures access for low-literacy users

### 2. Operational Feasibility

Hospital staff and pharmacies can easily update records and stock in real-time.

Doctors save time by remote consultations, and health dept. gets analytics dashboard.

### 3. Economic Feasibility

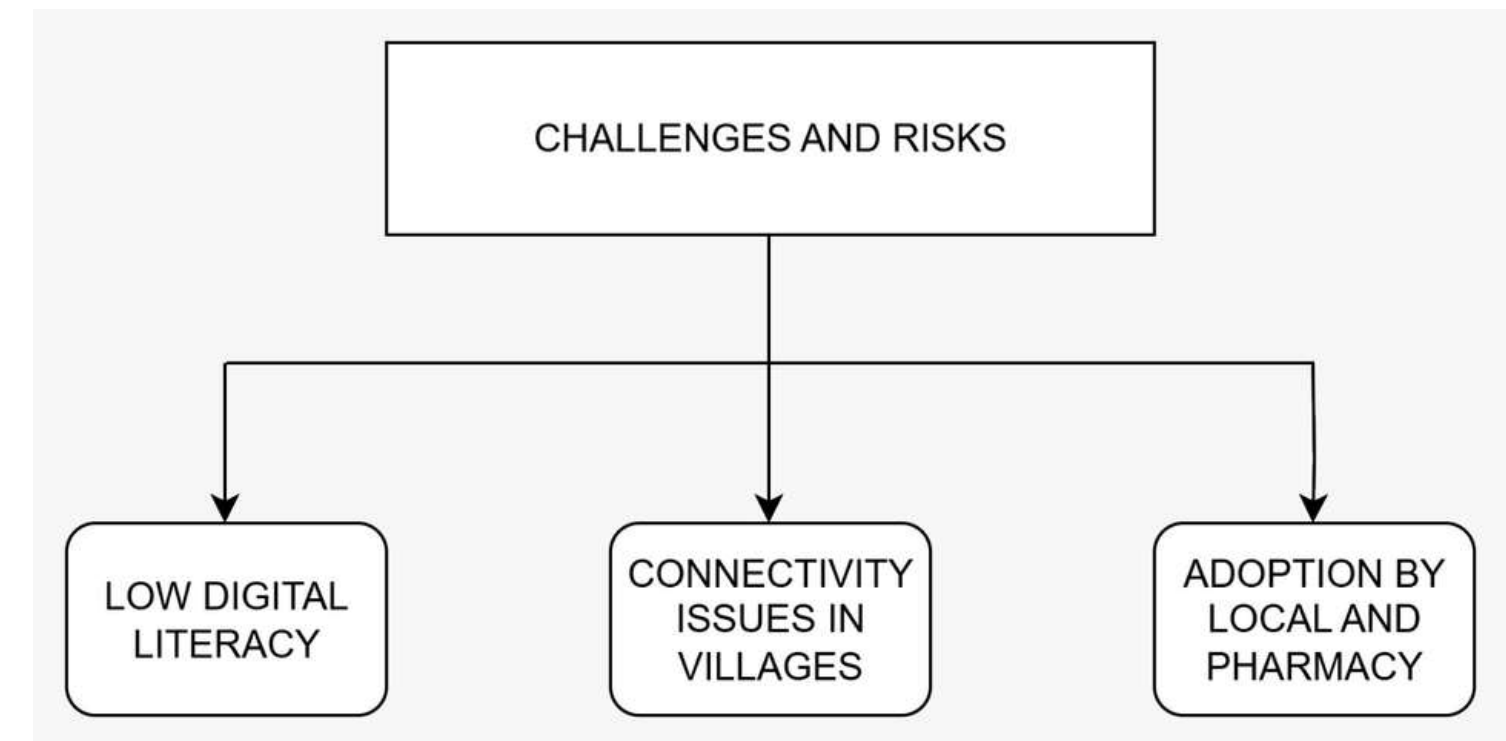
Reduces travel costs and income loss for patients from 173 villages.

Cloud-based system is low-cost to deploy and scale across regions.

### 4. Social Feasibility

Improves timely healthcare access and reduces health risks. Multilingual and voice-enabled support ensures easy community adoption.

## POTENTIAL CHALLENGES AND RISKS



## MITIGATION STRATEGIES

- Voice-enabled chatbot for low-literate users.
- Offline records with periodic sync.
- Government partnerships for hospital & pharmacy integration.

## POTENTIAL IMPACTS BENEFITS OF THE SOLUTION

### 1. Healthcare Impact

- a. Early detection of diseases through AI triage reduces complications.
- b. Continuous medical support improves overall community health index.

### 2. Economic Impact

- a. Prevents loss of daily wages by avoiding unnecessary hospital trips.
- b. Cuts extra spending on transport, food, and lodging during hospital visits.

### 3. Social Impact

- a. Empowers rural families with self-reliant healthcare access.
- b. Builds trust between villagers and healthcare system.

### 4. Government & Systemic Impact

- a. Provides real-time data to health authorities for better planning.
- b. Reduces pressure on understaffed rural hospitals.

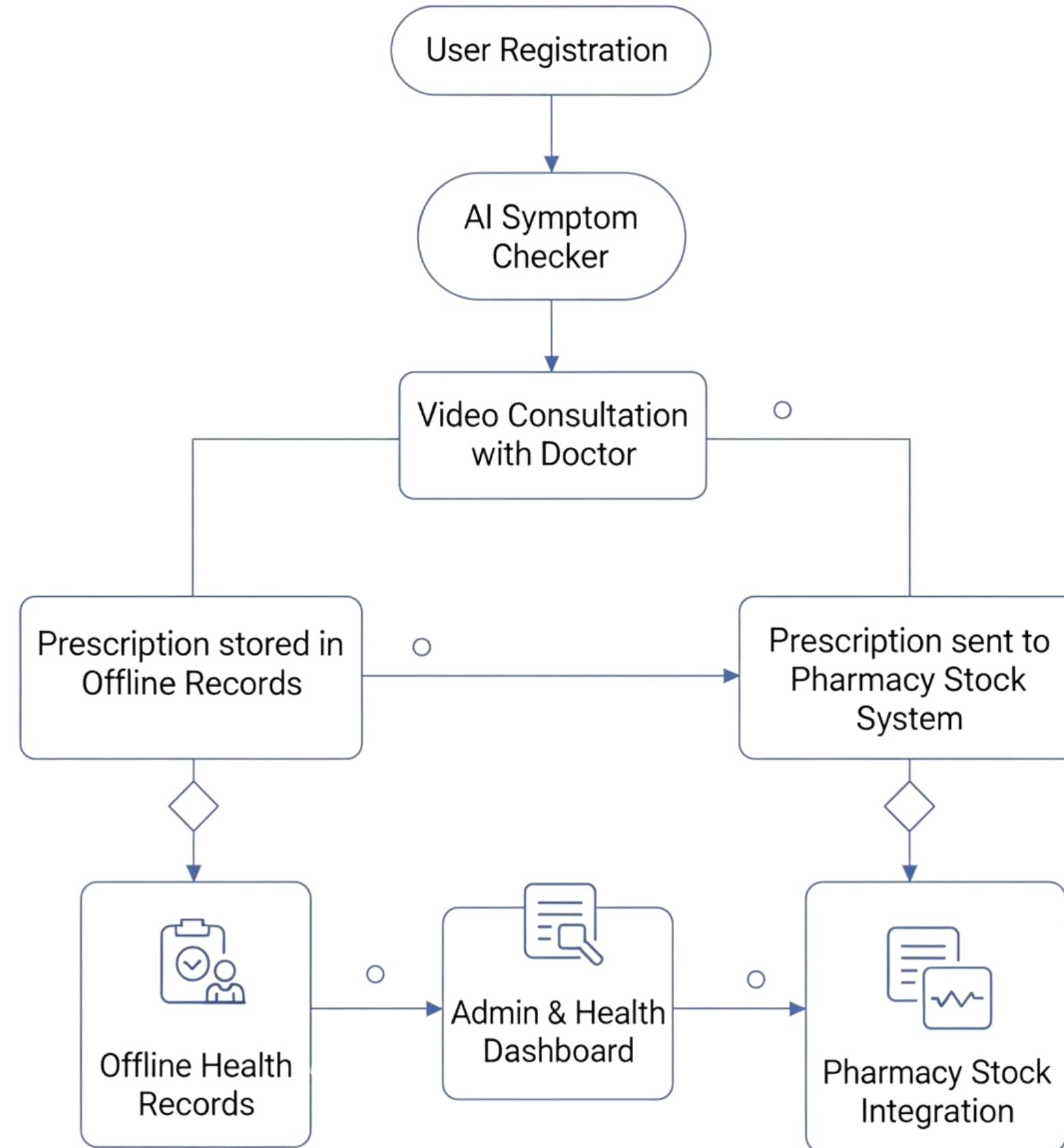
### 5. Scalability & Long-term Benefit

- a. Creates a replicable model for rural healthcare across India.
- b. Promotes digital health literacy and long-term adoption of telemedicine.





# WORKFLOW DIAGRAM



1. National Digital Health Mission (NDHM), Govt. of India – Guidelines for digital health ecosystem.

↪ <https://ndhm.gov.in>

2. Disease Symptom & Patient Dataset (Kaggle) – For AI chatbot & symptom checker training.

↪ <https://www.kaggle.com/datasets/itachi9604/disease-symptom-description-dataset>

3. OpenFDA Drug Database – Standard drug & prescription data for medicine recommendations.

↪ <https://open.fda.gov/apis/drug/>

4. eSanjeevani Telemedicine Platform (Govt. of India) – Reference for telemedicine best practices.

↪ <https://esanjeevani.in>

5. WHO ICD-10 Codes – Global standard for disease classification.

↪ <https://icd.who.int/>