CODEZEN 2026

Project Title : SamjhoDawai

Team Name : The_Sustainer

Team Members *(Name + Roles Briefly)* :
Adrika Gaur +Full-Stack Lead & AI Researcher.

Tracks Chosen *(Healthcare , AI/ML ,Web3, Development, Sustainability, Internet of things , Open Innovation etc..)* **: Healthcare, AI.ML**

PRoBLEM STATEMENT & TARgET AuDIENcE

Problem We're Solving

The Issue:

- Handwritten prescriptions are often hard to read.

- Medical terms are difficult for elderly and non-English-speaking patients to understand.

ReaHife stats:

- 34% of patients in Indian hospitals experience medication errors

- 40% of prescription errors are due to poor handwriting

- Only 12% of prescriptions are fully legible

- This leads to ~5.2 million medication errors every year in India

Target Users

- Age group : 50+
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- Sector: Rural areas
- Business model: B2C

Impacted audience (who faces this issue?) :

- Elderly citizens

- Rural populations

- Speakers of regional languages (B2C)

OuR UNIquE SOLuTION

Key Features

- Handwriting OCR: Converts messy doctor handwriting into structured medicine data.

- Regional Language Simplifier: Explains medicines in simple Hindi and other Indian languages

- Safety Checks: Flags dosage risks using age and weight

- Medical Chatbot: Answers basic questions in the user's language

Any USPs (what makes it new or better ?)

- Prescription → Action, not just text: Converts handwritten prescriptions into a clear, time-based daily schedule.

- Built for Indian patients: Explains medicines in simple regional languages, not medical English.

- Safety-first by design: Uses patient details (age, weight) to flag risky dosages that generic OCR apps ignore.
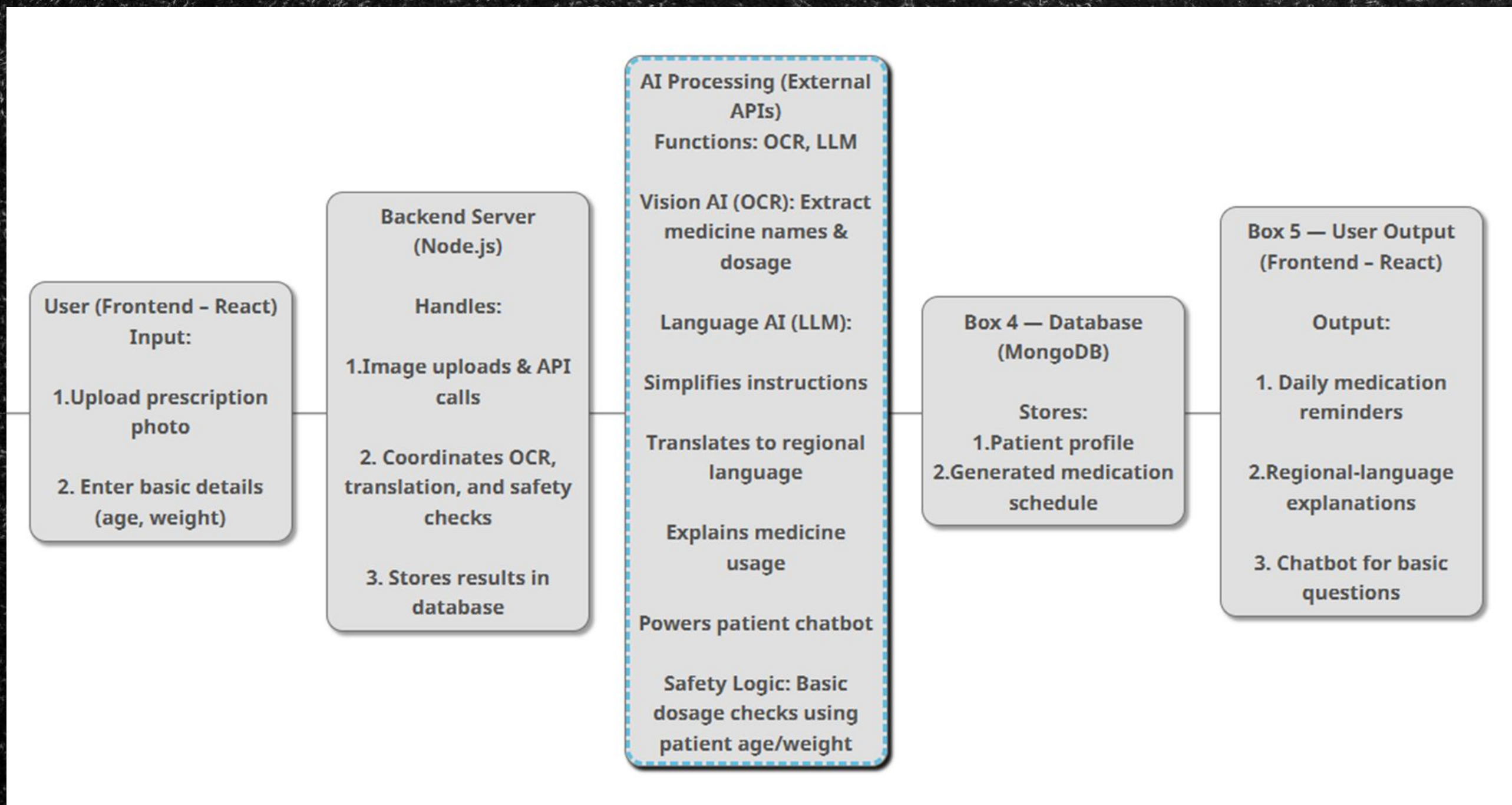
Why It's Different

- Built specifically for **medical prescriptions**, not general translation.
- Converts prescriptions into a **time-based daily schedule**, not just text in your **regional language**.
- Focuses on **understanding and safety**, not word-for-word translation.

How it directly solves the problem:

• It bridges the "Prescription Gap" by converting illegible doctor's notes into a clear, time-based digital schedule that the elderly can read, UNDERSTAND and follow independently.

TEcH STAcK + ARcHITEcTuRE

User (Frontend – React)
Input:

1. Upload prescription photo

2. Enter basic details (age, weight)

Backend Server (Node.js)

Handles:

1. Image uploads & API calls

2. Coordinates OCR, translation, and safety checks

3. Stores results in database

AI Processing (External APIs)
Functions: OCR, LLM

Vision AI (OCR): Extract medicine names & dosage

Language AI (LLM):

Simplifies instructions

Translates to regional language

Explains medicine usage

Powers patient chatbot

Safety Logic: Basic dosage checks using patient age/weight

Box 4 — Database (MongoDB)

Stores:
1. Patient profile
2. Generated medication schedule

Box 5 — User Output (Frontend – React)

Output:

1. Daily medication reminders

2. Regional-language explanations

3. Chatbot for basic questions

Tech Stack

- **Frontend: React** (to build a responsive user interface).

- **Backend: Node.js** (to manage logic and handle API requests).

- **Database: MongoDB** (to "remember" user biometrics like age and height).

- **APIs: Google Vision API or OpenAI** (for the OCR handwriting extraction and transaltion)

FEASIbILITY AND SHOWsTOPPERs

Feasibility

Hackathon-scale build:

- Built within a 36-hour window using pre-trained OCR and LLM APIs, avoiding custom model training.

Modular tech stack:

- React + Node.js enables rapid prototyping and smooth integration with external AI services.

No dataset dependency:

- The prototype works on user-uploaded prescription images, removing the need for large pre-collected datasets.

Showstoppers

Illegible handwriting Risk:

- OCR confidence drops on messy or low-light handwriting.
- Mitigation: Low-confidence outputs are flagged and require user confirmation or re-upload.

Loss of meaning during translation Risk:

- Medical instructions may lose clarity in regional languages.
- Mitigation: The system prioritizes clear dosing instructions (e.g., "after breakfast") over complex terminology.

Data privacy concerns Risk:

- Handling age/weight data is sensitive.
- Mitigation: Minimal biometric storage, encrypted at rest, used only for session-level safety checks.

USP & BUSINESS MODEL

USP

- **Prescription-Aware OCR:**
Uses OCR APIs with medical-specific processing to read doctor prescriptions more accurately

Language + Clarity First:
Explains medicines in simple regional languages, not just translated text

Safety Checks Built-In:
Flags possible dosage risks using basic patient details (age, weight)Actionable Output: Converts prescriptions into a clear, time-based daily schedule

Business Model

Direct-to-User (B2C):
Elderly users and caregivers access the platform directly

Free to Use:
Designed as an accessibility-first healthcare support tool

Scalable Impact:
Can be adopted widely without financial barriers

Future Scope:
Potential partnerships with healthcare organizations or government programs