# EY Techathon 5.0 Executive Summary

Date of submission: 24th November, 2024

## PROBLEM STATEMENT

HEALTHCARE - Empowering traveling doctors with AI

## Team: SyncDocx

**Punjab Engineering College, Chandigarh**

EY TECHATHON 5.0

Shape the future with confidence

# HEALTHAXIS AI: Navigating healthcare challenges with precision and AI

**Problem Statement:**
Ravi, a rural doctor, struggles with limited resources, weak internet, and paper-based records, making consistent care and chronic patient monitoring difficult. An economical, AI-powered solution is needed to centralize data, enable offline access, provide predictive insights, and ensure data privacy for better healthcare delivery.

Solution Form Factor:
Mobile App (PWA)

## TEAM INFORMATION

| | |
|---|---|
| **Akshit Saini** | **Gen-AI integration** |
| **Nalin Kumar Gupta** | **Backend, Frontend and Deployment** |
| **Shaily Shambhavi** | **Product Management and Design** |
| **Survagya Bali** | **Backend and Product Design** |

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# EXECUTIVE SUMMARY

## PAIN POINTS

**Inefficient Paper-Based Records:**
Incomplete or outdated records lead to gaps in patient care.

**Connectivity Challenges:**
Poor internet disrupts data uploads and access to vital resources.

**Limited Access to Medical Guidelines:**
Absence of real-time resources increases treatment risks.

**Delayed Outbreak Response:**
Difficulty in tracking regional disease trends hinders timely action.

**Lack of Chronic Disease Tracking:**
Limited tools and data for consistent monitoring and predictive insights.

## PROPOSED SOLUTION

**Centralized Patient Records**
Digitizes patient data with longitudinal tracking for comprehensive management and reduced reliance on paper records.

**Automated Follow-Ups and Scheduling**
Sends health update requests to patients and helps doctors manage daily schedules efficiently.

**Offline Sync**
Ensures data is stored offline and uploaded once connectivity is restored.

**Controlled Shared Access**
Allows doctors to authorize practitioners for follow-ups and record updates.

**AI-Driven Predictive Insights**
Analyzes disease progression and predicts health risks based on patient history and demographics.

**Knowledge Support through Gen-AI**
AI-driven tool providing tailored diagnoses using medical guidelines, databases, and patient history.

**Medicine Management System**
Tracks medicine usage and ensures proper stock availability.

**Responsible AI and Data Privacy**
Ensures ethical AI use with robust data encryption and secure access.

## TECH STACK

**Backend Framework: Django (DRF)**
**Database: PostgreSQL , MongoDB**

**Frontend: Flutter**
**Local Database: Hive**

**Security: AES-256, TLS, HIPAA Compliance**

**Deployment: Docker, Kubernetes**

**AI/ML Models: BERT-based NLP, PyTorch, TensorFlow**

**Hosting: AWS (EC2, S3, RDS)**