Problem Statement

India's healthcare system is burdened by excessive manual administrative tasks—handwritten forms, PDF-based records, and data re-entry across disparate systems. This results in slower patient care, resource wastage, and costly errors. Similar inefficiencies in the U.S. account for over $1 trillion annually. But with the advent of LLMs and AI-driven tools, there's now an opportunity to automate these workflows and enhance care delivery.

Target Audience

- **Healthcare Administrators** in hospitals, clinics, and insurance offices
- **Medical Staff** (nurses, doctors) grappling with paperwork
- **Health Workers** in rural settings with limited digital infrastructure
- **IT Teams/HealthTech Providers** integrating legacy systems

Relevance of Problem

- **Efficiency & Cost Savings**: Automated workflows can reduce staff workload and minimize data errors.
- **Improved Patient Care**: Less time on paperwork means more time for diagnosis and treatment.
- **Digital Equity**: Rural health workers empowered with voice and AI tools can better serve underserved populations.
- **Scalable Innovation**: A modular AI solution can be expanded across diverse healthcare settings.

Gen-AI Use Case

"AI Assistant for Healthcare Admin Automation"
A Gen-AI solution that extracts data from scanned prescriptions, supports voice-based medical record entry, and integrates across hospital systems. It helps doctors, administrators, and rural health workers handle data efficiently and focus more on care.

Solution Framework

1. Document Processing & OCR
    - Use OCR to digitize scanned prescriptions, lab reports
    - Apply AI to extract key data: patient details, diagnoses, medications
2. Data Structuring via LLMs
    - Use LLMs to convert unstructured text into structured records
    - Include fields like vitals, symptoms, dosages, and test results
3. Voice-to-Text for Medical Entry
    - Enable voice input for filling EHRs
    - Tune for Indian languages and medical terms
4. System Integration & Automation
    - Automate data flow between hospital systems using APIs/RPA
    - Sync reports with billing, insurance, and diagnostic systems
5. Conversational AI for Rural Staff
    - Mobile assistant that retrieves/adds data via chat or voice
    - Works offline and syncs when online

Expected Impact

- 60–70% Time Saved on manual tasks
- Improved Accuracy in patient records
- Scalable Across India: Urban and rural use cases
- Empowered Health Workers with simple AI tools
- Faster Care with less administrative drag