Reducing Healthcare Inefficiencies with AI

Problem Statement

Manual form-filling, outdated records, and scattered handwritten notes slow down patient care and burn out health workers, especially in rural India. Key medical data remains trapped in voice notes or scanned documents, making digitization harder.

Target Audience & Context

Formless.Med is built for government doctors, nurses, admin staff, and rural health workers like ASHA and ANMs. These professionals deal with overcrowded OPDs, paperwork overload, and limited infrastructure. They are key to India's health digitization push — but current tools don't fit their workflows. We aim to bridge that gap with a system built around their constraints, not against them.

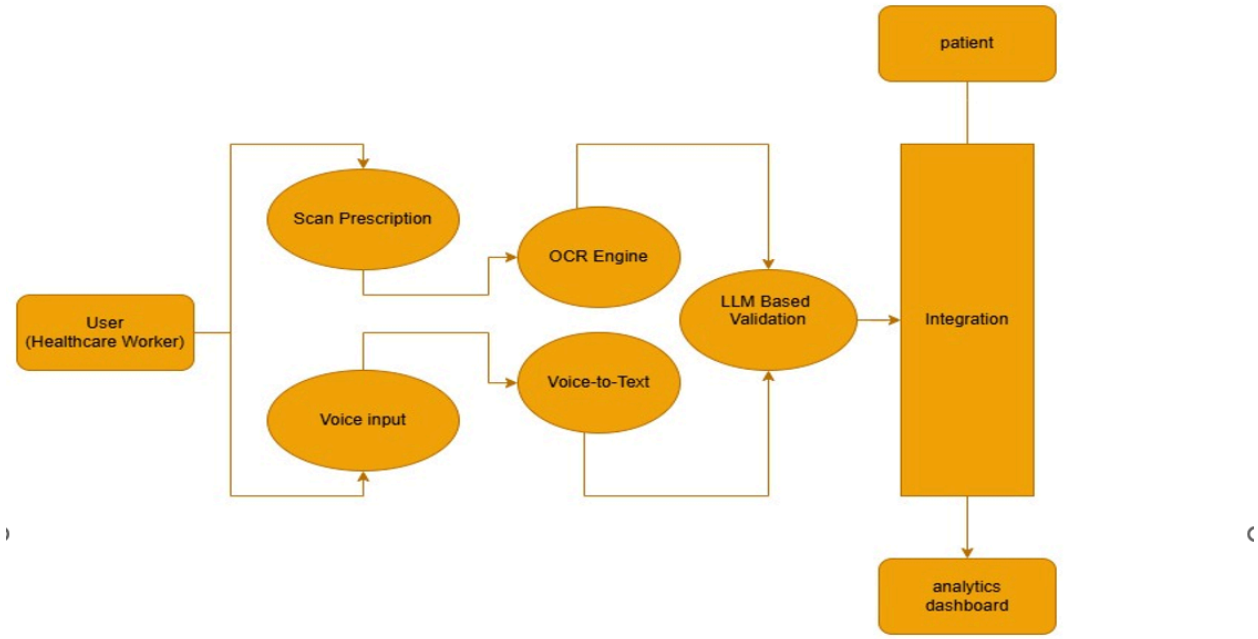
Use of Gen-AI

Formless.Med uses Gen-AI to turn messy inputs into clean digital records. OCR extracts text from handwritten or scanned reports. LLMs identify and structure key medical details. Voice-to-text allows staff to dictate rather than type. A built-in AI assistant, supporting regional languages, guides rural users through form-filling, record search, and registration via voice or chat. Together, these tools create an intuitive system that works in any setting — from urban hospitals to rural health centers — without needing new habits or expensive hardware.

Solution Framework

The user uploads a document or speaks into the app. OCR captures the content, while an LLM processes it to extract key fields like diagnosis, medication, and patient ID. For voice inputs, the system transcribes in real-time. A built-in AI assistant helps rural workers register patients and retrieve records through voice prompts or chat — with optional regional language support via translation and voice synthesis.

Once reviewed, structured data is pushed to EHRs, insurance platforms, or ABDM systems through secure APIs. The app is cloud-native but supports offline mode with local sync, ensuring usability in low-connectivity regions.



Feasibility & Execution

Formless.Med can be built using open-source tools like Tesseract or LayoutLM for OCR, Whisper for voice, and GPT-4-tuned LLMs for structuring data. It runs on cloud infrastructure with offline support for rural users. Within the hackathon window, we aim to demo: scanned prescription digitization, voice-powered form filling, and multilingual AI assistance for a basic outpatient flow.

Scalability & Impact

The solution is built to scale from a small PHC to large public hospitals. Its modular, lightweight architecture and ABDM-ready API support make integration simple. By automating admin tasks, it cuts down delays, prevents errors, and improves care delivery. It empowers staff with tools they already understand — voice, scan, and speak — but powered by AI.

Conclusion / Summary & Bonus Minimum Lovable Product

Formless.Med offers a clear, usable solution to a daily problem: healthcare admin inefficiency. It’s not just tech — it’s a tool frontline workers can adopt instantly, without changing how they work. From day one, it adds value. Built with rural-first constraints and Gen-AI at its core, it’s a Minimum Lovable Product with real potential to scale across India’s public health network.