CALLING JARVIS

Project Title: MediShakti – India's First Family-Centered AI Companion for Post-Hospital Life

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🚨 Problem Statement

India sees a large number of post-discharge complications that lead to hospital readmissions or fatalities—not because of lack of treatment, but because of miscommunication or misunderstanding at the point of discharge. Families often receive complicated documents full of medical terms in English, confusing handwritten prescriptions, and inconsistent verbal advice. Especially in rural or semi-literate households, this causes fear, panic, or complete inaction.
This problem contributes significantly to preventable deaths in post-hospital care.

👥 Target Audience

MediShakti directly supports the non-medical caregivers—sons, daughters, spouses, or even neighbors—who are responsible for patient care at home.
Our focus is:
•Semi-literate caregivers in Tier 2, 3 cities and rural India
•Households where prescriptions and medical slips are the only source of guidance
•Families speaking regional Indian languages, not fluent in English or technical jargon

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⚓How Gen-AI Powers MediShakti

MediShakti transforms post-hospital confusion into clarity using Generative AI:

- OpenAI GPT-3.5 translates complex medical terms into simplified, caregiver-friendly language
- OCR (tesseract.js) scans and reads handwritten or printed prescriptions
- Multilingual output & text-to-speech gives users an explanation in their own language

Caregivers simply upload a prescription or discharge image, choose a language (e.g., Hindi, Gujarati, Marathi), and instantly receive:

- Medicine name, purpose, and timing
- Dietary instructions (if any)
- Emergency warning signs to watch

🧠 Solution Framework

MediShakti transforms post-hospital confusion into clarity using Generative AI:

1. 📄 AI Discharge Companion
- Reads and explains discharge summaries:
- OCR ➜ GPT ➜ Simplified care plan
- Regional language & voice narration

2.💊 PillWise AI – Smart Medicine Guide
- Detects medicine names, dosages, and timings
- Converts them into a daily schedule (Morning, Afternoon, Night)
- Explains each medicine in layman's terms

3. 🧠 Caregiver Stress Detector
- Sentiment analysis on caregiver feedback (via voice/text)
- Suggests calming techniques, quotes, reminders

4. 📌 Family Risk Tracker
- Reads past prescriptions and discharge slips
- Identifies chronic health patterns (e.g., diabetes, hypertension)
- Alerts families of screenings needed

🏠Tech Stack:

Tool	Purpose
GPT-3.5 (OpenAI)	AI-based text generation & translation
tesseract.js	Extract text from scanned documents
Node.js + Express	Backend + API logic
HTML/CSS/JS	Simple UI for uploads & results
Multer	File upload handler
SpeechSynthesis API	Speaks results aloud

Scalability & Impact:

MediShakti is designed for mass deployment in India:

- Can integrate with Arogya Setu, PM-JAY health kiosks, eSanjeevani telehealth platform
- Lightweight: requires only a mobile camera and internet access
- Language support can expand to all 22 scheduled languages
- Future integrations: WhatsApp chatbot, IVR-based phone assistant, SMS alerts

Impact projection:

- Reduce readmission rate from post-surgery confusion by 30%
- Improve prescription adherence by 40%
- Save lives by making emergency symptoms understandable
- Easily extendable to voice assistants, SMS alerts, and WhatsApp bots

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Minimum Lovable Product

We already have a working MVP with 2 tools:

- AI Discharge Companion
- PillWise AI – Smart Medicine Guide

Built entirely with:

- Free & open-source tools
- Cloud-hosted via Replit
- Real medical document tested (sample prescription)

Appendix – Visual Flow

User Flow Diagram

Upload ➜ 2. OCR ➜ 3. GPT Explanation ➜ 4. Multilingual Output ➜ 5. Voice Support

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Conclusion

MediShakti bridges a very real gap in India's post-hospital care system. We don't just want to build a Gen-AI solution—we want to build trust between hospitals and families. "From discharge to recovery, MediShakti walks with every Indian family—one photo, one plan, one life at a time."