Problem Statement/Concept Title: HealneX – Seamless Healthcare Innovation

Reimagining healthcare accessibility and efficiency using technology

Theme: Healthcare
Team Name: CodeX
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State: Gujarat

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Problem – Proposed Solution

Hack for Social Cause

Core Problems

- Limited access in rural & underserved areas
- Disconnected medical records across providers
- High consultation & treatment costs
- Poor continuity of care and follow-up
- Trust gap towards digital consultations

Proposed Solution – HealneX

- Unified digital platform for patients, doctors, and admins
- Quick OTP & DigiLocker signup
- Secure appointment booking, payments, and teleconsultation (video, voice, chat)
- Medical record upload and management with privacy
- AI driven insights, engagement rewards, and referrals
- Preventive care via reminders, early risk alerts, and health monitoring
- Mental health and wellness support through teleconsultation
- Multilingual support for regional accessibility
- Voice assistance and screen reader support for visually impaired users

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Technical Approach

Hack for Social Cause

- Proven web & mobile tech; scalable microservices – Python Flask
- Integration with payment & messaging APIs – Stripe & Twilio
- Cloud-ready, modular & multi-region deployment - Render
- AI analytics for personalised recommendations - Transformers Model
- AI driven public health analytics using anonymized data for population level insights.
- AI powered automation agents for appointment reminders, follow ups, and message based interactions.
- AI powered doctor discovery with advanced filtering

- User Service
- Appointment Service
- Payment Service
- Teleconsult Service
- Record Service
- Notification Service

Live Prototype Demo Video GitHub

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Impact Potential

Hack for Social Cause

Access
Improved access for remote populations

Cost
Reduced healthcare costs

Continuity
Better continuity & outcomes

Trust
Increased trust & transparency

- Integration with government public healthcare centers (PHCs)
- Assisted access for illiterate users through PHC support
- Increased patient trust via government backed accountability

Target Audience & Stakeholders

- Patients (remote & underserved)
- Doctors & clinics
- Administrators & policy makers
- Technology partners & regulators

Expected Measurable Impact

- Higher adoption of teleconsultations & reduced wait times
- Lower out-of-pocket expenses for patients
- Enhanced continuity & adherence to care
- Greater trust & satisfaction in digital health

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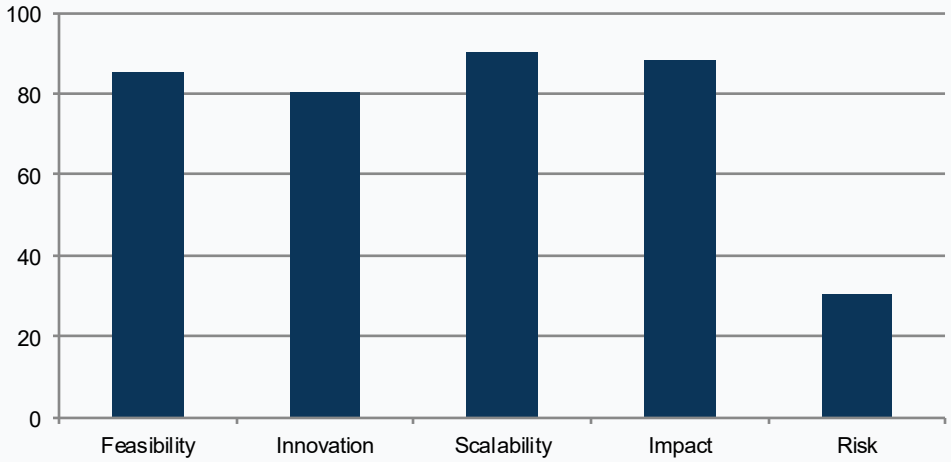
Feasibility & Risk Analysis

Hack for Social Cause

Feasibility & Scalability

- Built on proven web and mobile technologies
- Integrated payment and messaging APIs
- Modular microservices based architecture
- Cloud ready, multi region, and regulation adaptable
- Multilingual support across regions
- Scalable system for future portable diagnostic device integration
- Automated real time messaging and workflow automation
- Reduced legal and operational risk through government partnership
- Shared accountability with public healthcare institutions



Risks & Mitigation

- Digital divide & adoption barriers
- Data security & privacy concerns
- Regulatory compliance challenges
- High implementation & maintenance costs
- Mitigation: pilot programmes, robust encryption, partnerships & user education

Future Scope

- Critical support during pandemics and public health emergencies
- Extension of healthcare services to animal patients
- Tiered care levels for structured treatment and follow ups
  - Level 1: Basic consultation
  - Level 2: Diagnostics and lab reports
  - Level 3: Advanced care and surgery

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Team

Hack for Social Cause

Ram

Role: Developer & Backend Lead

Responsibilities:

- Architecture & APIs
- Database & Security
- Deployment & Testing

Umang

Role: Designer & Frontend Lead

Responsibilities:

- UI/UX & Frontend
- User Research & Documentation
- Presentation & Demo

Krish

Role: AI/ML Lead

Responsibilities:

- Model Research and Data Study
- Model Training Evaluation and Optimization
- Dataset Preparation

Problem Identification — Recognised healthcare gaps

Prototype Development — Built POC & MVP

Demo & Pilot — Showcased at Hackathon

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References

Hack for Social Cause

- National Digital Health Mission guidelines
https://ndhm.gov.in
- Ayushman Bharat Digital Mission health records framework
https://abdm.gov.in
- Telemedicine Practice Guidelines by Ministry of Health
https://www.nmc.org.in
- WHO Digital Health Guidelines
https://www.who.int/publications/i
- UN Sustainable Development Goals
https://sdgs.un.org/goals
- NITI Aayog reports on digital health in India
https://www.niti.gov.in
- World Bank insights on telemedicine in rural areas
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