THE BUG SLAYERS

TITLE PAGE

- Problem Statement ID – 25018
- Problem Statement Title- Telemedicine Access for Rural Healthcare in Nabha
- Theme- MedTech/BioTech/HealthTech
- PS Category- Software
- Team Name - The Bug Slayers

IDEA : TELEMEDICINE FOR RURAL AREAS

IDEA

Traditional Way of consultancy specially in rural areas are so outdated that villagers need to travels for hours to get a better and budget friendly consultancies.

We are here !!
We are creating a web - app for rural areas that connect specialized doctors around area to connect with rural people and propose best solution for there problems

PROBLEM RESOLUTION

We are Creating a Web application for rural areas by which they can connect with outside world of doctor to provide them quick aid over travelling to other city

Why we ? What we Provide ?

- One on One video-call → to connect Doctors to patient directly
- Ai- powered chat bot → Language Friendly - for commom disease like common cold , knee pain etc.
- Huge Database of specialized doctors
- Low-Cost Healthcare → Cuts travel & hospital visit expenses
- Scalable Model → Can be deployed across 1000+ rural clusters with minimal setup

For the rural people the greatest aid is someone caring for them so with this motive we are here to create real impact on there life

TECHNICAL APPROACH

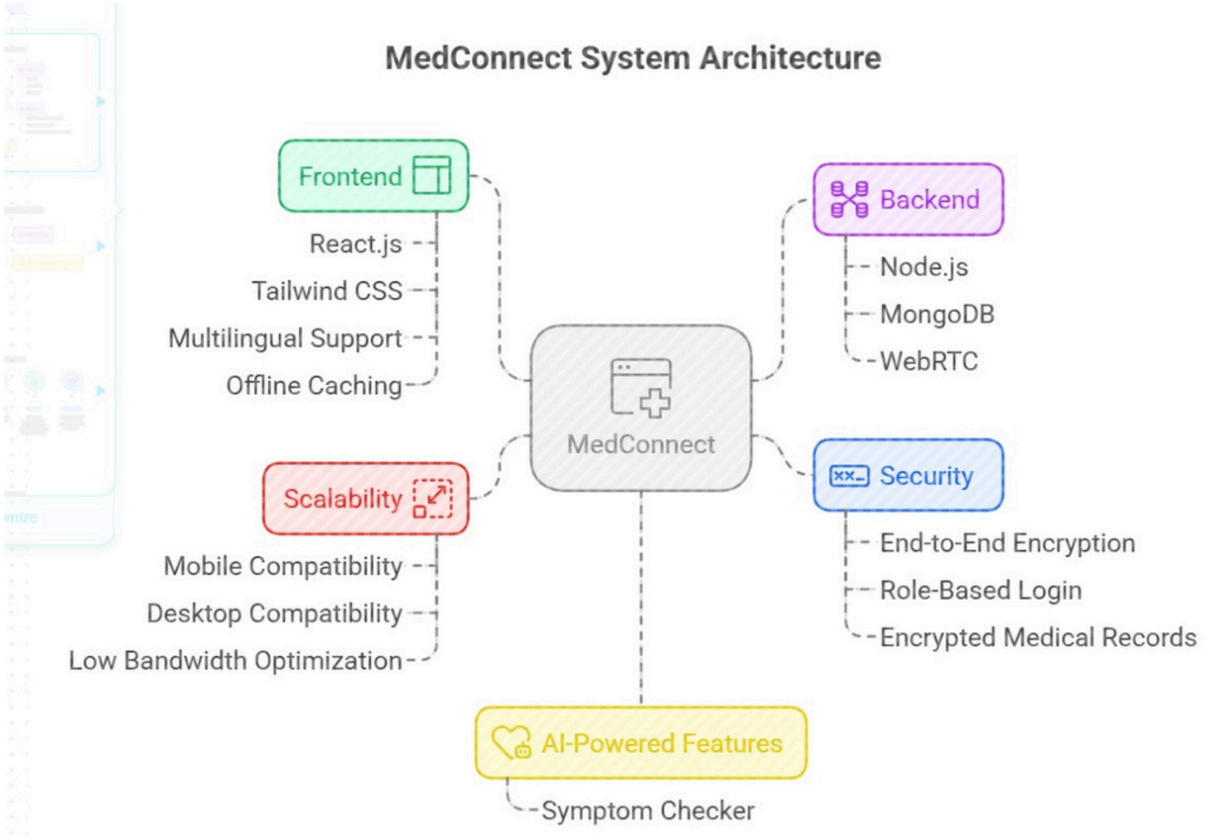
Technical Flow of Our Web - APP

FRONTEND : The UI BasedTech which is Visullay Impactful and easy to understand

- **React.js ,**
- **Tailwind CSS**
- **ShadCn UI**

BACKEND : Secured Backend that prevents data leaking and end-end encrypted video calls

- **Node.js (Express.js)**
- **Database: MongoDB**
- **WebRTc (Video Calls)**
- **Auth: JWT**



FEASIBILITY AND VIABILITY

FEASIBILITY ANALYSIS

- Uses web technologies (React, Node.js, MongoDB) – proven, scalable stack
- Progressive Web App (PWA) → accessible on low-end devices & poor networks

POTENTIAL RISKS:

- Limited internet access in rural areas
- Resistance to technology adoption by elderly users
- Scaling platform for large number of users

STRATIGIES TO OVERCOME CHALLANGES

- Offline-first design → caching for low connectivity
- Allow flexible doctor scheduling + reminders
- Multilingual + voice-enabled UI for accessibility
- Regular consultation with health ministry & medical boards.

IMPACT AND BENEFITS

- **Reach**
- Villagers or rural india can connect to doctors virtually
- **Social problem with social impact**
- Inclusive → Multilingual support for rural users
- Early diagnosis improves community well-being
- **Economic**
- Saves travel cost & work-time loss
- Affordable consultations + support to local pharmacies
- **Health**
- AI-based symptom checker reduces doctor load
- Digital health records ensure continuity of care
- **Environmental**
- Less travel → Lower carbon footprint
- Promotes digital-first healthcar

RESEARCH AND REFERENCES

- **Digital Health Interventions for Primary Healthcare in LMICs – PLOS Global Public Health**
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- **World Health Organization (WHO) – Telemedicine: Opportunities and Developments**
  https://www.who.int/publications/i/item/9789241550505
- **NCBI Bookshelf – Telemedicine Overview**
  https://www.ncbi.nlm.nih.gov/books/NBK541905/
- **Press Release – Digital Health Initiatives by Govt. of India (PIB)**
  https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2094604