

Project Proposal: **Prerona** (প্রেরণা) - A Digital Health Ecosystem for Female

Slogan: Join us in revolutionizing healthcare for a healthier Bangladesh!

1. Project Overview

Prerona (প্রেরণা) is a transformative digital health ecosystem designed to provide accessible, personalized, and data-driven healthcare solutions for women and girls in Bangladesh, particularly in remote and underserved regions. Utilizing AI, IoT, and machine learning (ML), Prerona ensures equitable access to primary healthcare services via mobile applications, one-stop phone calls, and a web-based platform. Our goal is to bridge the healthcare gap for pregnant women, adolescents, and marginalized communities by offering real-time medical advice, maternal and reproductive health guidance, mental health support, and socio-economic empowerment tools at a low cost.

2. Problem Statement

Millions of women and girls in Bangladesh, especially in rural, coastal, and hilly areas, face severe barriers to quality healthcare. These include:

1. Lack of access to medical professionals in remote areas.
2. Limited maternal and reproductive health services.
3. High adolescent pregnancy rates.
4. Socio-economic constraints limiting healthcare affordability.
5. Language barriers in accessing digital health solutions.
6. Gaps in gender-specific medical research and technology.
7. Limited mental health support for women and adolescents.

Prerona directly addresses these challenges by providing inclusive, AI-driven healthcare access tailored to the needs of marginalized groups, covering both physical and mental health.

3. Technology & Innovation

Prerona integrates cutting-edge frontier technologies to revolutionize healthcare access:

- **AI-powered Symptom Checker:** Users receive instant, AI-driven primary diagnosis **and** health recommendations for both physical and mental health concerns.
- **24/7 Telemedicine Network:** Doctors, nurses, mental health counselors, and community healthcare workers provide consultations through mobile and web-based platforms.

- **IoT-enabled Health Monitoring:** Wearable devices and smart health monitoring for pregnant women, chronic disease patients, and mental health tracking.
- **Multilingual Voice Assistance:** Solutions available in Bengali and indigenous dialects to ensure inclusivity, besides English.
- **Privacy-Focused Health Data Platform:** Secure storage of personalized health records with full user control.
- **Gender-Responsive AI & Data Analytics:** Identifying patterns in women's health and mental well-being to drive policy advocacy.

4. Target Beneficiaries

Prerona focuses on underserved and vulnerable communities, including:

- Pregnant women in rural areas who lack maternal healthcare.
- Adolescents at risk of early pregnancy and mental health issues.
- Women with limited financial and digital literacy.
- Persons with disabilities needing specialized healthcare access.
- Healthcare workers in remote areas requiring AI-powered support.
- Women and girls experiencing stress, anxiety, and depression needing accessible mental health services.
- Socially neglected women

5. Implementation Plan

Phase 1: Research & Development (0-6 months)

- Finalizing AI and IoT-driven **healthcare and mental health support models**.
- Partnering with **local hospitals, and government agencies**.
- Developing a **pilot mobile app and telehealth service**.

Phase 2: Pilot Deployment (6-12 months)

- Launching a **beta version** in **selected rural districts**.
- Training **local healthcare providers and mental health professionals**.
- Gathering **user feedback** and refining the system.

Phase 3: Scale-Up & Expansion (12-24 months)

- Expanding to **hill tracts, Sundarbans, and coastal villages**.
- Enhancing AI with **localized datasets**.
- Introducing **financial aid integration** for healthcare access.

6. Inclusivity, Ethics & Data Privacy

- **Designed for Low-Resource Environments:** Works in **low-connectivity areas** and on **basic mobile phones**.

- **Language Inclusivity:** Available in **Bengali, Chakma, and other indigenous languages.**
- **Bias-Free AI:** Using representative datasets to ensure fairness in medical and mental health recommendations.
- **User-Controlled Data:** Full privacy, encryption, and consent-based health record sharing.

7. Sustainability & Scalability

- **Revenue Model:** Freemium services with low-cost premium AI-driven consultations for affordability.
- **Strategic Partnerships:** Collaborating with UNICEF, and healthcare providers.
- **Integration with Government Programs:** Aligning with Bangladesh's Digital Health Initiatives for sustainable impact.
- **AI-Powered Research:** Supporting data-driven policymaking in women's physical and mental healthcare.

8. Alignment with UNICEF FemTech Call

Prerona directly contributes to **UNICEF's key focus areas:**

- Improving health outcomes through AI-powered maternal, reproductive, and mental health solutions.
- Addressing gender-specific challenges by closing the gender data gap and ensuring healthcare accessibility for marginalized women.
- Empowering women socio-economically by facilitating financial inclusion and workforce participation through digital health services.

9. Conclusion

Prerona (প্রেরণা) is not just a health service; it is a movement to empower women and girls with equitable, data-driven, and technology-enabled healthcare access. By integrating both mental and physical health services, we ensure holistic well-being. With UNICEF's support, we aim to revolutionize digital health for women in Bangladesh and beyond.