

# **AI-Powered Remote Patient Monitoring: Ethical and Sustainability Considerations**

## **Ethical Considerations**

My app also tackles key ethical issues in technology which includes:

### **Privacy & Data Security**

- Your use of local caching, offline support, and selective data visualization respects user privacy and supports safe use in low-connectivity zones.

### **Equity & Inclusion**

- Multilingual UI design ensures cultural relevance and improves usability for users regardless of background.
- Simple UX mode allows access for users with low digital literacy or limited device capability.

## **Ethical Review Checklist**

Data Privacy:

Are patient data anonymized, encrypted, or stored locally when needed?

Bias Mitigation:

Has the model been tested across diverse demographics to ensure fairness?

Informed Consent:

Is there a mechanism to notify users how their data is used and let them opt in/out?

Human Oversight:

Is AI guidance clearly positioned as supportive rather than diagnostic or prescriptive?

Digital Inclusion:

Does the app support local languages, low-data mode, and simple UX for all literacy levels?

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Transparency:

Are decisions and risk scores explainable and easy to interpret by healthcare workers?

Access Equity:

Can underserved communities use the app effectively without premium hardware or fast internet?

## **Sustainability Assessment**

Dimension: Energy Efficiency

Sustainable Practice: Uses lightweight models in low-data mode

Project Approach: Reduces CPU load and power consumption

Dimension: Decentralized Care

Sustainable Practice: Enables monitoring without physical travel

Project Approach: Reduces carbon emissions & hospital congestion

Dimension: Longevity of Use

Sustainable Practice: Designed for scalability in low-resource areas

Project Approach: Uses simple tools like Streamlit + caching

Dimension: Open Ecosystem

Sustainable Practice: Built with open-source libraries

Project Approach: Encourages knowledge sharing & community contribution

Dimension: Cultural Adaptability

Sustainable Practice: Respects local norms & languages

Project Approach: Multilingual support including Igbo, Hausa, Yoruba