VITA GUARD
The Health Monitoring Kit

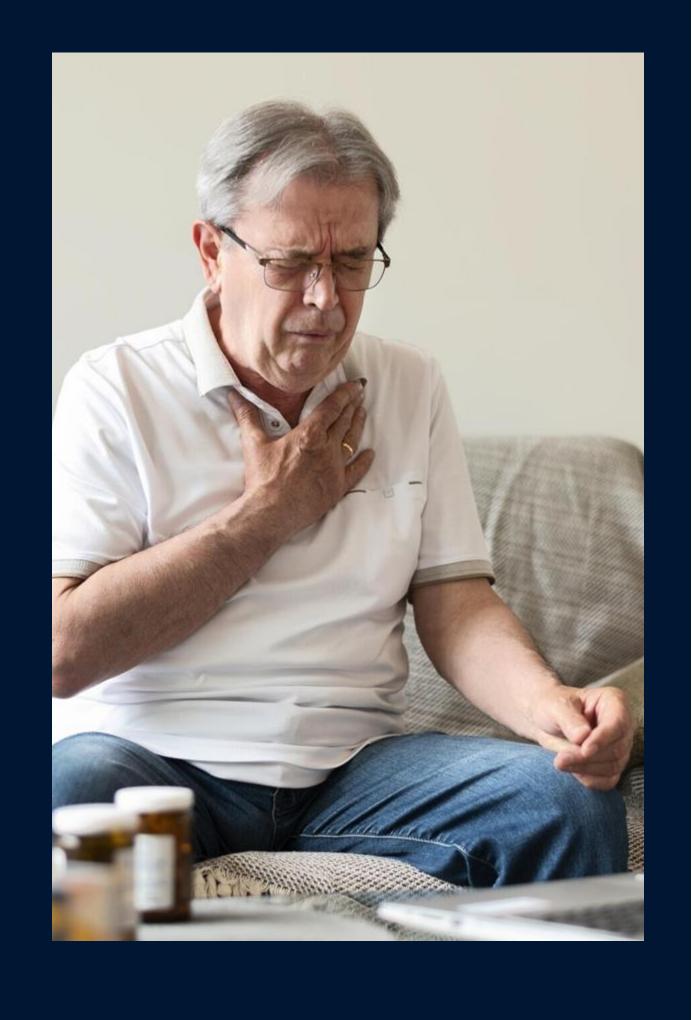
Team Name: TECH SURGE

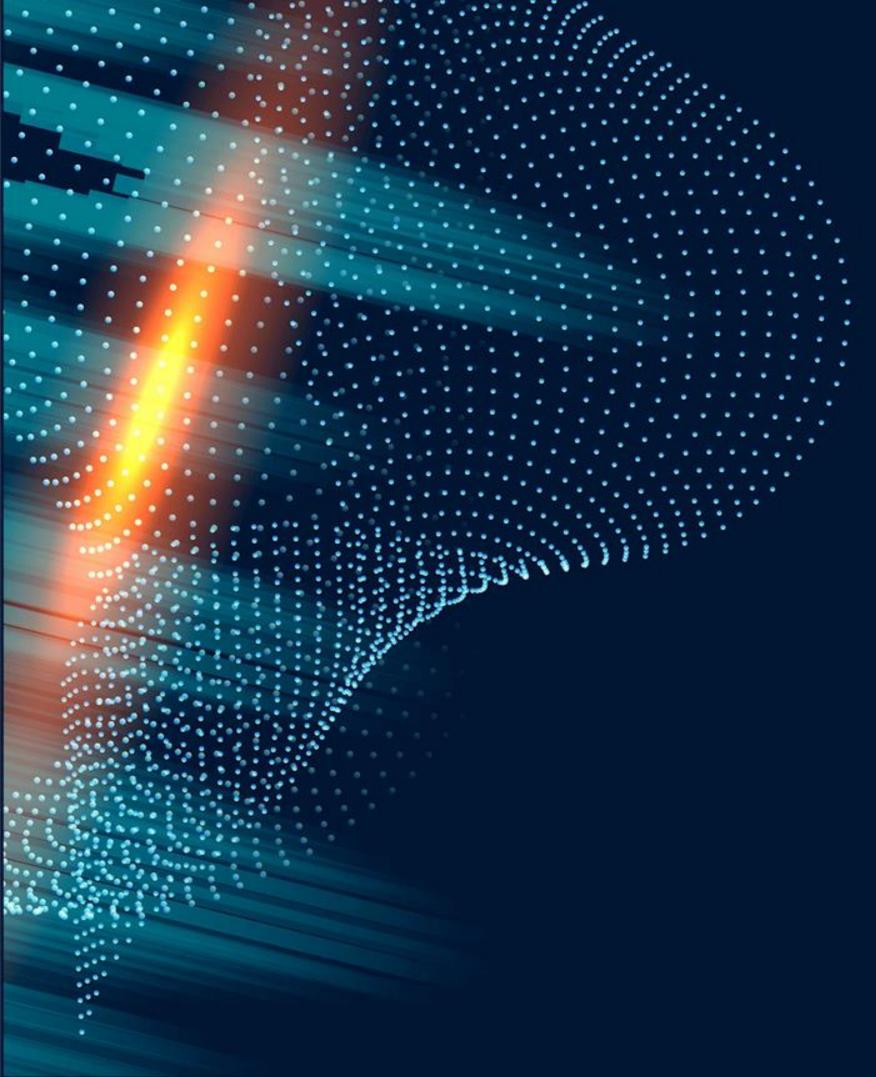
Problem Statement

AI Healthcare Problem: Currently, many people lack access to timely and efficient healthcare, especially for early diagnosis and monitoring of health conditions.

Relevant Statistics and Research:
Current healthcare monitoring
systems often require expensive
equipment and specialized
personnel.

Current Gaps:
Inadequate continuous health
monitoring. Lack of early
warning systems for patients
with chronic conditions.





Solution

Overview

Proposed Solution:

A health wristband equipped with multiple sensors for real-time monitoring of vital health metrics like heart rate, blood pressure, and respiratory rate.

Integrated AI to analyze the data and predict potential health issues, providing early warnings.

Innovative Aspects:

Automated alerts to caretakers and emergency services in case of anomalies. Waterproof design and user-friendly interface.

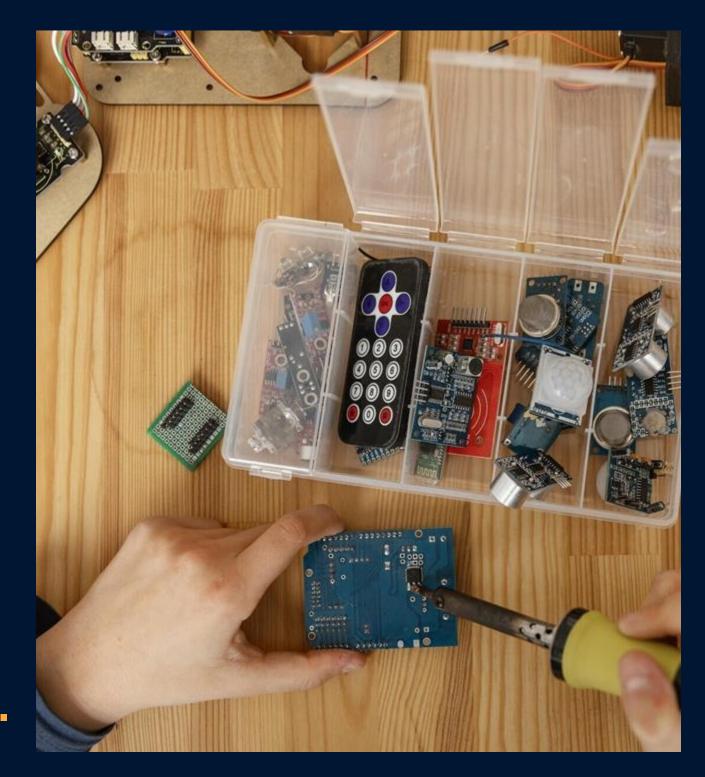
Differentiator: Unlike existing health monitors, our solution integrates real-time data analysis and immediate action steps (alerts, calls) in one wearable device.

Technology Stack Software:

- 1. Embedded C for hardware programming.
- 2. AI algorithms for data analysis and health predictions.
- 3. Mobile app for user interaction and health data display.

Hardware:

- 1. Arduino Uno, temperature sensor, heart rate sensor, respiratory sensor, blood pressure sensor.
- 2. GSM and GPS modules for communication and location tracking. LCD display for real-time data output.
- 3. Data Analytics: Monitoring trends in the patient's health data over time for predictive analysis.



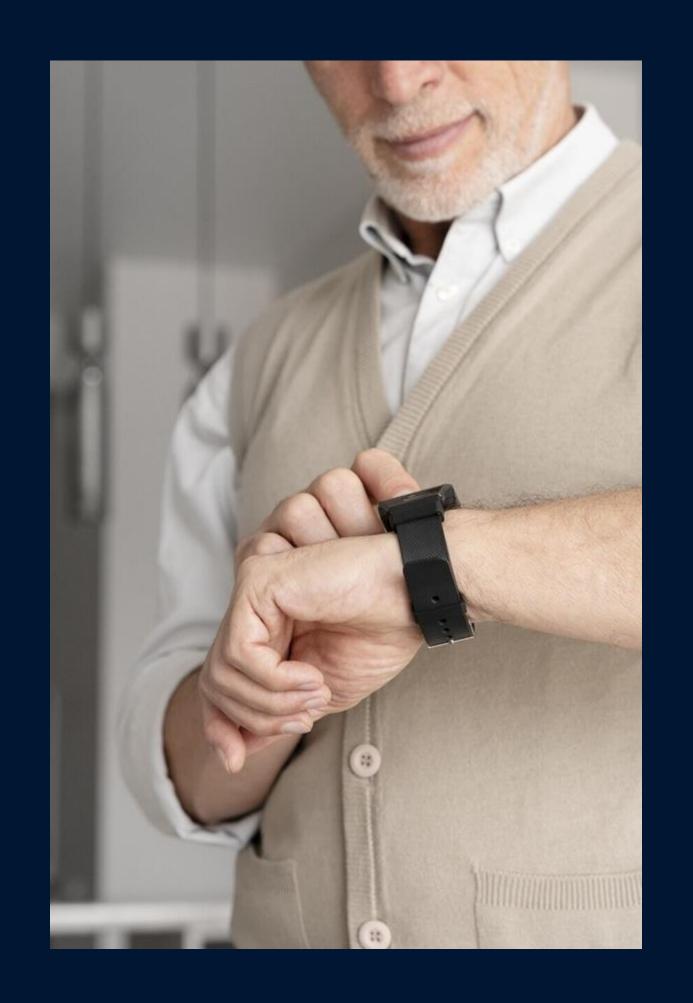
Impact on Healthcare

Accessibility:
Provides affordable, real-time
health monitoring to
individuals, especially those in
remote or underserved areas.

Affordability:
Cost-effective compared to traditional hospital-based monitoring systems.

Patient Care Benefits: Early detection and alerts can save lives by prompting timely medical intervention. Empowers patients to be proactive about their health.

Benefits for Healthcare Providers: Offers valuable health data for better patient management and decision-



Implementation Plan

Prototype Development:

Creating the wristband with embedded sensors and developing the accompanying mobile app.

Data Analysis:

Implementing AI algorithms to process and analyze collected data.

Testing:

Conducting trials to ensure the accuracy and reliability of health monitoring and alert systems.

Potential Challenges:

Ensuring accuracy and reliability in various real-worldconditions. Handling privacy and security of health data.

Overcoming Challenges:

Implement thorough testing and validation. Use encryption and secure data transmission methods.

Future Scope Scalability:

Expand the range of monitored health metrics (e.g., glucose levels, ECG).

Further Development:

Integration with other healthcare systems (e.g., hospital databases). Developing an advanced AI module for personalized health advice.

Potential Enhancements:

Making the device smaller and more comfortable. Introducing a community feature where users can share data with healthcare providers or family members for added support.

Thank you!

