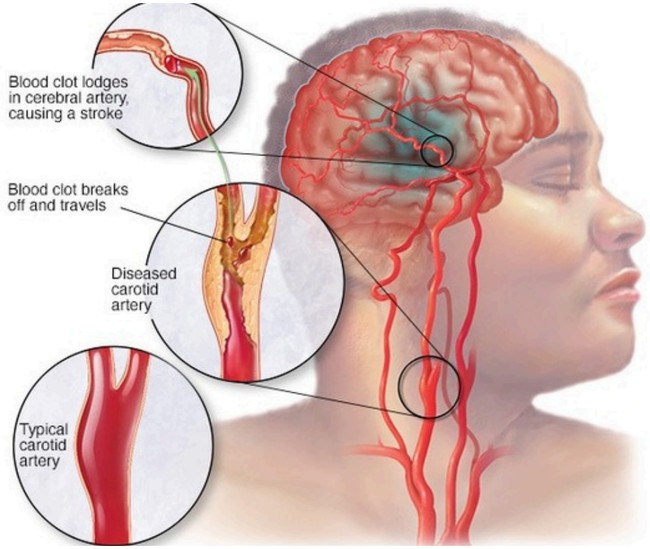
Team Name: 5 Alive

- **Project Title**= CardioMitra: Your AI-Powered Shield Against Stroke
- **Domain** = Biomedical Engineering
- **PS Category-** Healthcare Innovation (IOT Hardware + Software)

PROBLEM STATEMENT

Title: The Invisible Killer: Why Stroke Screening Fails Millions



The Problem: Stroke is a leading cause of death & disability, but prevention is inaccessible. **70% of rural Indians cannot get screened.** ***(WHO, 2024)***

Why? The 3 Critical Barriers:

- 💰 **Cost:** Machines cost **>$20,000**
- 🏥 **Location:** Only in **urban hospitals**
- 👴 **Expertise:** Requires **specialist doctors**

PROPOSED SOLUTION

Title: CardioMitra: Your AI-Powered Shield Against Stroke

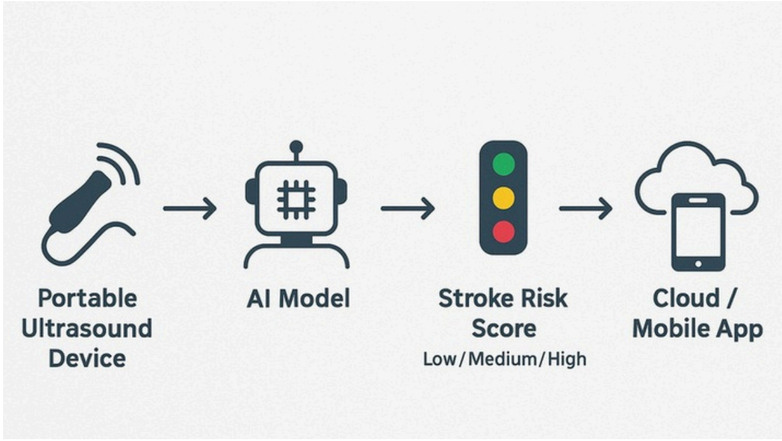
The Concept: A wearable neckband that makes advanced stroke screening simple, affordable, and accessible.

How It Works:

Wear: comfortably place the device on the neck.

Scan: initiate a quick, non-invasive analysis.

Know: receive an instant AI-powered risk assessment on a connected app.



Key Innovation:

🤖 **AI Analysis: Detects plaque buildup instantly.**

📱 **Connected App: Delivers clear results (Low/Medium/High Risk).**

🌍 **Built for Reach: Affordable and portable for everyone.**

EXPECTED OUTCOME

Title: From Scan to Solution: How Cardio Mitra Delivers Instant Peace of Mind

‘Simple. Smart. Life-Saving’.

CardioMitra: Stroke Risk in 60 Seconds

How It Works:

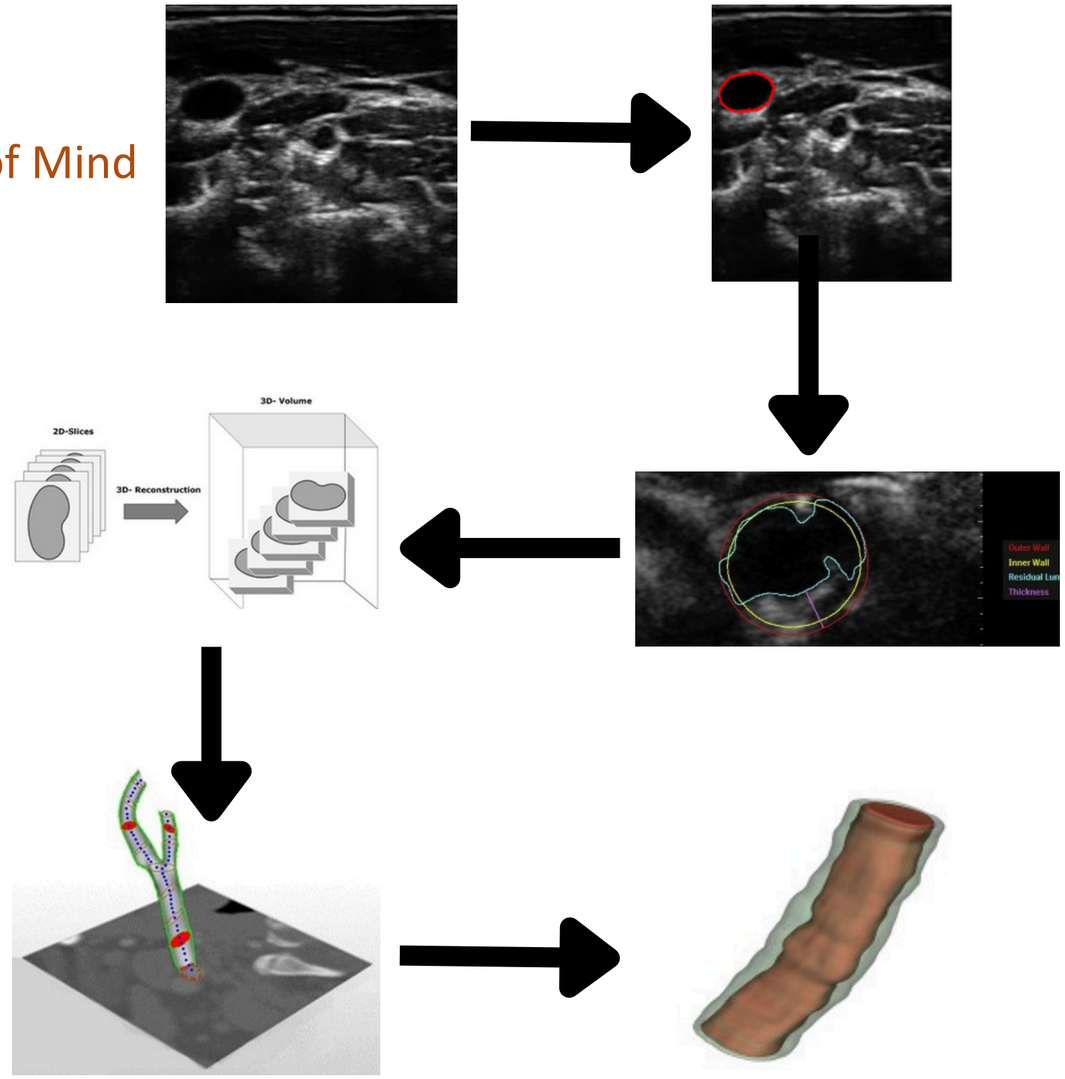
- Wear & Scan - One-button operation
- AI Analyzes - On-device plaque detection
- Get Results - Instant risk score + doctor sharing

Key Tech:

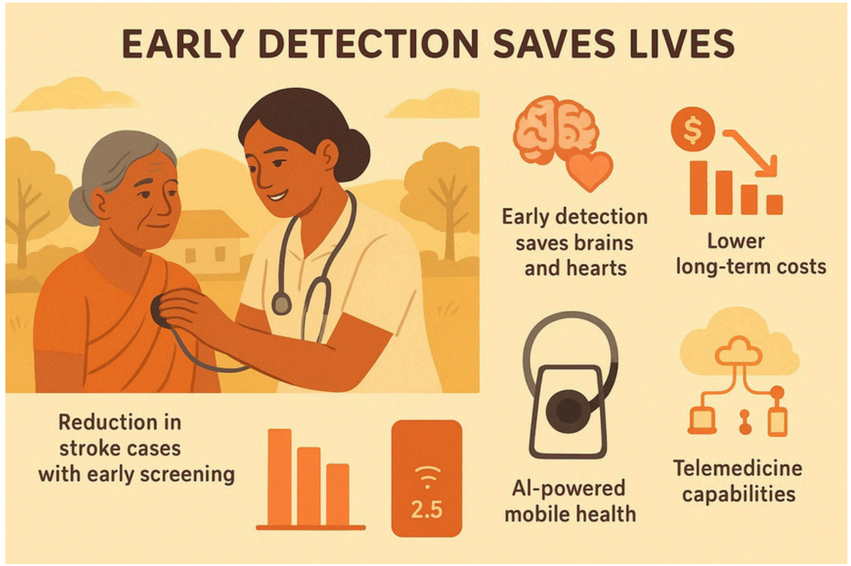
Wearable Sensors • On-Device AI • Mobile App

Clinic-level screening anywhere.

Simple. Smart. Life-Saving.



APPLICATIONS



🌍 **Social**

Early stroke detection in rural areas — lifesaving, accessible care.

💵 **Economic**

Low-cost screening — reduces long-term healthcare expenses.

⚕️ **Medical**

Real-time AI + portable design — faster diagnosis, better outcomes.

Research Validation

Clinical AI: Stanford study validates carotid plaque detection.

Sensor Tech: FSR and pressure insole research enables hemodynamic sensing.

Medical Standards: Spinal orthosis principles guide safe, compliant design.

AIGNITE 2.0

TECHXHIBIT

THANK

YOU