

VIBEAITHON 2025

PROJECT TITLE : GUARDIAN ANGEL

THEME : CYBER RESILIENCY IN AI ERA

TEAM NAME : TECH TURTLES

PROBLEM STATEMENT

- **CLEARLY DEFINE THE USER PROBLEM OR OPPORTUNITY?**

Women face combined physical and AI-driven digital threats: harassment, unsafe spaces, medical emergencies, plus cyber threats such as deepfakes, phishing, cyberstalking, and identity abuse. There is an urgent need for a holistic solution combining personal safety Current safety tools are fragmented -phone-dependent SOS, slow activation, and little/no AI cyber-resilience.

- **WHO IS FACING THIS ISSUE?**

Women and girls – especially students, working professionals, travelers, commuters and those in rural areas-face both physical and online threats, also many women in IT, healthcare, education, or service sectors work late-night or early shifts face these issues.

- **WHY IS IT IMPORTANT TO SOLVE IT NOW?**

- ☐ Current tools depend on internet and smartphones – which may fail during emergencies or network loss.
- ☐ Emergencies happens in seconds-unlocking a phone or opening an app is too slow which can be dangerous.
- ☐ A dedicated gadget gives instant SOS at the press of a button or through voice.

SOLUTION OVERVIEW

● WHAT DOES YOUR IDEA DO?

Guardian Angel is a wearable AI-powered safety companion providing 360-degree protection. It offers instant SOS, GPS tracking, fall detection, AI Threat Shield for cyber risk analysis, fingerprint authentication to prevent misuse, and offline SMS fallback. By merging wearable sensors with AI-based cyber defense, it ensures proactive and reactive safety for women.

● KEY FEATURES OR TECHNOLOGY INVOLVED?

- ☐ 360° Safety Protection (Offline + Online)
- ☐ Panic Button & Voice Sos
- ☐ Ai Threat Shield (Cyber Resilience)
- ☐ Biometric Fingerprint Authentication
- ☐ Gps Tracker + Safe Route Navigation
- ☐ Ai Safety Bot (Generative Ai Assistant)
- ☐ Health & Fall Detection
- ☐ Offline Sms Fallback
- ☐ Ai-powered Cyber Forensics

● WHY IT IS UNIQUE OR INNOVATIVE?

Fuses Physical Safety And Proactive Cyber Defense In One Product — Not Just SOS, But Prevention, Evidence Collection, And Biometric Control.

DESIRABILITY (USER NEED)

- **WHO ARE YOUR TARGET USERS?**

- ☐ Women and Girl Students (Primary Target Group).
- ☐ Working Women and Professionals.
- ☐ Parents and Guardians.
- ☐ Women Living Alone or Senior Citizens.
- ☐ Law Enforcement Agencies & NGOs
- ☐ Ride-Share and Transport Users (College/Working Women)

- **WHAT PAIN POINT DOES THIS SOLVE?**

- ☐ Offline (real-world threats).
- ☐ Online (cyber and digital threats).

- **ANY USER TESTIMONIALS OR VALIDATION?**

- ☐ **Student Users** [It's scary to walk home late. I can't grab my phone fast enough — this gadget that automatically alerts my location could really save lives]
- ☐ **Working Professionals**[During a cab ride, I felt unsafe but couldn't call anyone. The Guardian Angel's voice SOS would help me to alert my family silently]
- ☐ **Parents** [My daughter stays in a hostel; this Gadget lets me see she's safe even when offline]
- ☐ **Cyber Expert's View (Validation)**[AI-driven threats are rising fast. A wearable that combines AI detection with biometric security is a powerful idea for cyber resilience]

FEASIBILITY (CAN YOU BUILD IT?)

• TOOLS, PLATFORM OR TECH STACK USED

- **Frontend:** React Native (Mobile App), React.js (Web Dashboard)
- **Backend:** FastAPI (Python) + Firebase Firestore
- **AI / ML:** Hugging Face, OpenAI (for cyber threat & text analysis)
- **Hardware:** ESP32, GPS (NEO-6M), GSM (SIM800L), Fingerprint (R307), Heart Sensor (MAX30102)
- **Cloud & Alerts:** Google Cloud, Firebase, Twilio SMS
- **Security:** AES Encryption, Firebase Auth
- **Map API:** Google Maps (Safe Route Navigation)

• DEVELOPMENT ARCHITECTURE / PLANS

- **Smartwatch (IoT)** → Sensors collect data → Sent to **Mobile App**
- **App ↔ Backend (FastAPI)** for data sync & AI analysis
- **AI Layer** → Detects threats, sends proactive alerts
- **Firebase** stores user data, SOS logs
- **Web Dashboard (React)** → Monitors live alerts, locations
- **Offline Mode:** GSM SMS fallback during no internet

• RESOURCE AVAILABILITY AND LIMITATIONS

- ❑ **HARDWARE RESOURCES (AVAILABLE)** - ESP32 Development Board, MAX30102 Sensor, MPU6050, MAX4466 / INMP441 Mic, BME680 VOC Sensor, R307 Fingerprint Module, TP4056 + Li-Po Battery, Push Button, OLED Display (SSD1306).
- ❑ **SOFTWARE RESOURCES (AVAILABLE)**- Arduino IDE, FastAPI (Python), Firebase / Firestore, React Native (Expo), BLE Libraries, Hugging Face / OpenAI Models, Replit / ngrok, Cursor / Lovable / GitHub.

VIABILITY (IS IT SUSTAINABLE?)

- **REVENUE MODEL OR IMPACT MODEL**

- ☐ **Hybrid Sustainability Approach** – (Safety + Accessibility + Social Impact)
- ☐ Dual benefit — financial sustainability through subscriptions + social sustainability through partnerships and safety impact.

- **TARGET MARKET SIZE / DEMAND.**

“Every 3 minutes, a woman in India faces a safety threat — making Guardian Angel a product *that society needs, not just wants.*”

- **COST ESTIMATES / SCALABILITY POTENTIAL.**

- ☐ Electronics (ESP32 + sensors)-₹2,200
- ☐ Assembly + Battery - ₹500
- ☐ Packaging + Logistics - ₹300
- ☐ Total (Mass Unit):₹3,000 (~\$36)

“Our Model Ensures That Guardian Angel Is Both *Affordable And Sustainable.*

It Runs On A Low-cost Hardware Stack, Supports Offline Alerts, And Offers Premium Ai Features For Advanced Safety.

The Wearable Market Is Booming, But Few Products Combine *Ai + Iot + Cybersecurity* — And That’s Where We Stand Unique.”

PROTOTYPE / DEMO

- **SCREENSHOTS OR SHORT VIDEO DEMO.**
- **KEY INTERACTIONS AND UI HIGHLIGHTS.**
- **HOW IT ACTUALLY WORKS.**

❑ <https://github.com/srijha1408/Guardian-Angel-vibeAI>

ROADMAP

- **WHAT YOU HAVE BUILT SO FAR.**
- **NEXT 30/60/90-DAY PLAN.**
- **LONG-TERM VISION OR PRODUCT GROWTH PLAN.**

TEAM & ROLES

- **NAME | ROLE | SKILL**

- ☐ **S. Srijha** | Team Lead / AI Developer | ML Model Integration.
- ☐ **M. Lokeswari** | Hardware & Sensor Engineer | Arduino, ESP32, Circuit Wiring.
- ☐ **C. Swetha** | Mobile App Developer | UI/UX.
- ☐ **C. Monika** | Data Analyst & Documentation | Research, Data Visualization.

- **BACKGROUND / CREDENTIALS**

- ☐ Pre-final-year IT Students With Hands-on ML
- ☐ Skilled In Cross-platform Mobile App Design
- ☐ Strong Communicator And Technical Writer With Data Interpretation

- **WHY THIS TEAM IS CAPABLE OF EXECUTING THE PROJECT**

- ☐ With Mentorship And Resources, Our Team Can Scale Guardian Angel Into A Deployable, Real-world Safety Product.
- ☐ **TEAM MOTTO** - "Code With Purpose. Build For Safety. Innovate For Impact."

ASK

- **WHAT DO YOU WANT FROM JUDGES / AUDIENCE?**

- ☐ Funding Support
- ☐ Mentorship To Develop Secure Cloud + Ai Threat Shield With Real-time Analytics.
- ☐ Pilot-test The Device In Colleges And Offices (100+ Users)

- **FUNDING, MENTORSHIP, FEEDBACK, PARTNERS?**

- ☐ We Seek Mentorship In These Areas:
- ☐ **AI & Cybersecurity Experts:** To Refine Voice/Deepfake Detection Models.
- ☐ **Hardware & Iot Engineers:** To Miniaturize The Prototype Into A Smartwatch Form Factor.
- ☐ **Startup & Business Mentors:** For Guidance In Pricing, Patents, And Investor Readiness.

- **BE SPECIFIC AND REALISTIC**

“We Are Not Just Building A Device — We’re Building A *Guardian* That Protects Women Both Physically And Digitally.

With Your Support, Mentorship, And Partnership, We Can Make Guardian Angel India’s First Ai-powered Safety Wearable At A National Scale.”

THANK YOU

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- ❑ **GITHUB** - <https://github.com/srijha1408/Guardian-Angel-vibeAI>

<https://github.com/LokeshwariMagendran/guardian-angel-VIBEAI>

<https://github.com/MONIKACHITTIBABU/guardian-angel-VIBEAI>