Google Developer Group
NIST

ATLAS – GDG OnCampus Hackathon

Team Details

a. Team name: DOONDILEONS
b. Team leader name: NALLIMILLI SURYA PRAKASH REDDY
c. Problem Statement: Tech-Medics 108+ – Improving emergency medical response efficiency.

Google Developer Group
On Campus

Problem statement & Solution (Bridging the Gap: From Panic to Precision)

The Problem

- Black Box" Anxiety: Callers experience panic due to no visibility of ambulance location or arrival time.
- Connectivity Barrier: Emergency solutions fail in remote areas and highways with poor internet access.
- Dispatch Delays: Manual coordination and verbal address errors delay critical response during the Golden Hour.

Our Solution – Tech-Medics 108+

- Real-Time Visibility: Live ambulance tracking provides clarity and reassurance to victims.
- Offline Reliability: Location information is transmitted even without internet connectivity.
- Smart Dispatching: Automated nearest-ambulance assignment significantly reduces response time.

Google Developer Group
On Campus

Opportunities,Differentiation & Viability

Differentiation

- Live ambulance visibility replaces blind waiting
- Automated dispatch replaces manual coordination
- Works even without internet connectivity
- Calm, emergency-focused user experience

Opportunities

- Deployable for government 108 & Smart Cities
- Valuable for insurers via faster response outcomes
- Scalable to private hospital ambulance fleets

Viability

- Exact GPS eliminates location ambiguity
- Transparency reduces panic and repeat calls
- Automation cuts response time from minutes to seconds

Google Developer Group
On Campus

List of features offered by the solution

Live Ambulance Tracking
- Patients can see where the ambulance is and when it will arrive.

Works Without Internet
- Shares location using SMS when mobile data is unavailable.

Faster Ambulance Assignment
- Automatically sends the nearest ambulance to the emergency.

Driver-Friendly System
- Ambulance drivers get clear directions and status updates.

Simple & Calm Design
- Easy-to-use interface for stressful emergency situations.

Google Developer Group
On Campus

Technologies used in the solution

Backend & Core Services

- Python (Flask) with Socket.IO enables secure, real-time emergency coordination.

Data Management

- SQLite with SQLAlchemy ORM ensures reliable and structured system data.

Frontend Experience

- HTML5, JavaScript, and CSS3 deliver a responsive Glassmorphism-based user interface.

Mapping & Navigation

- Leaflet.js powers live, interactive location tracking and visualization.

Google Developer Group
On Campus

Google Technologies used in the solution

Google Maps Platform
- Used to generate universal location links for accurate and device-compatible navigation.

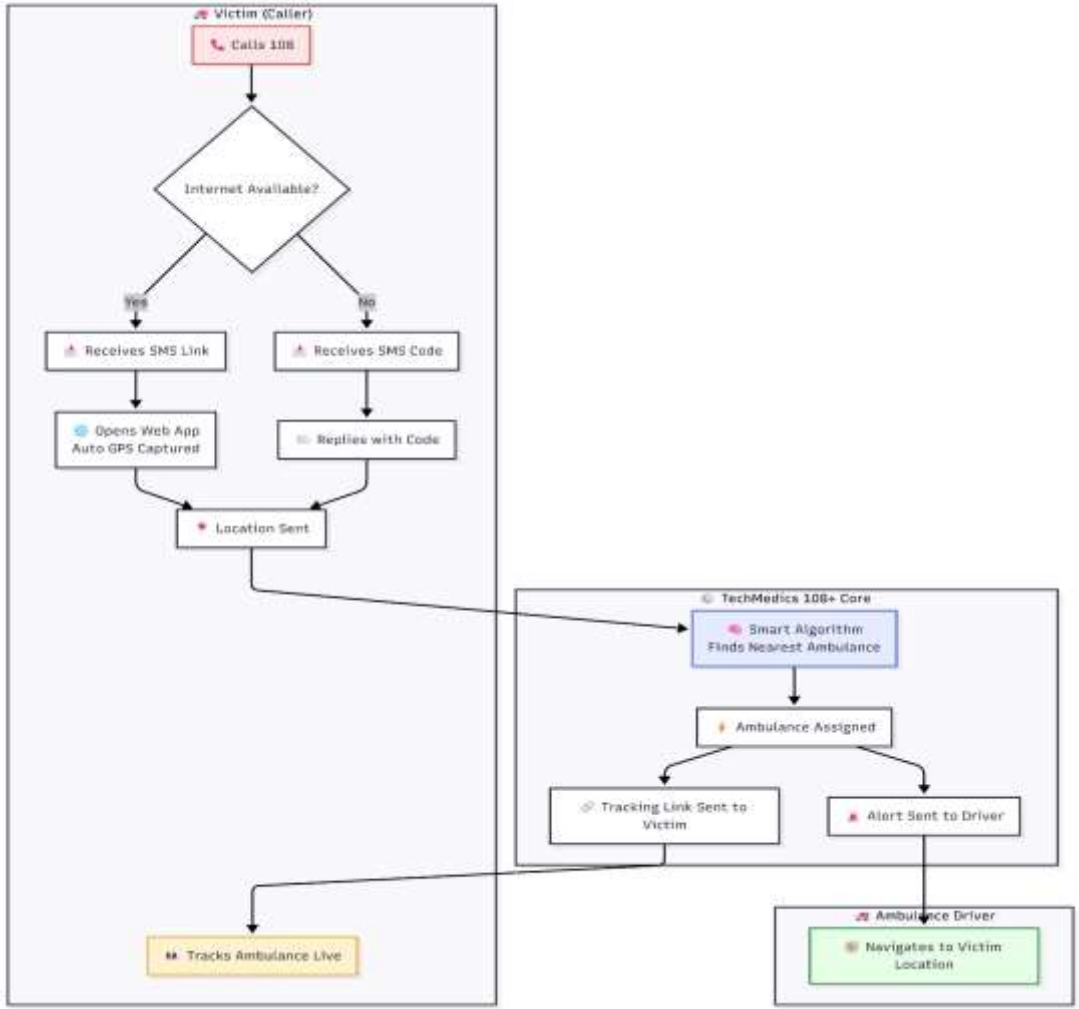
Google Drive
- Secure cloud storage for project assets and demo content.

Android Ecosystem
- Mobile-first design optimized for Android devices used by emergency responders.

Chromium Engine
- High-performance rendering through Chrome-based browsers for smooth user experience.

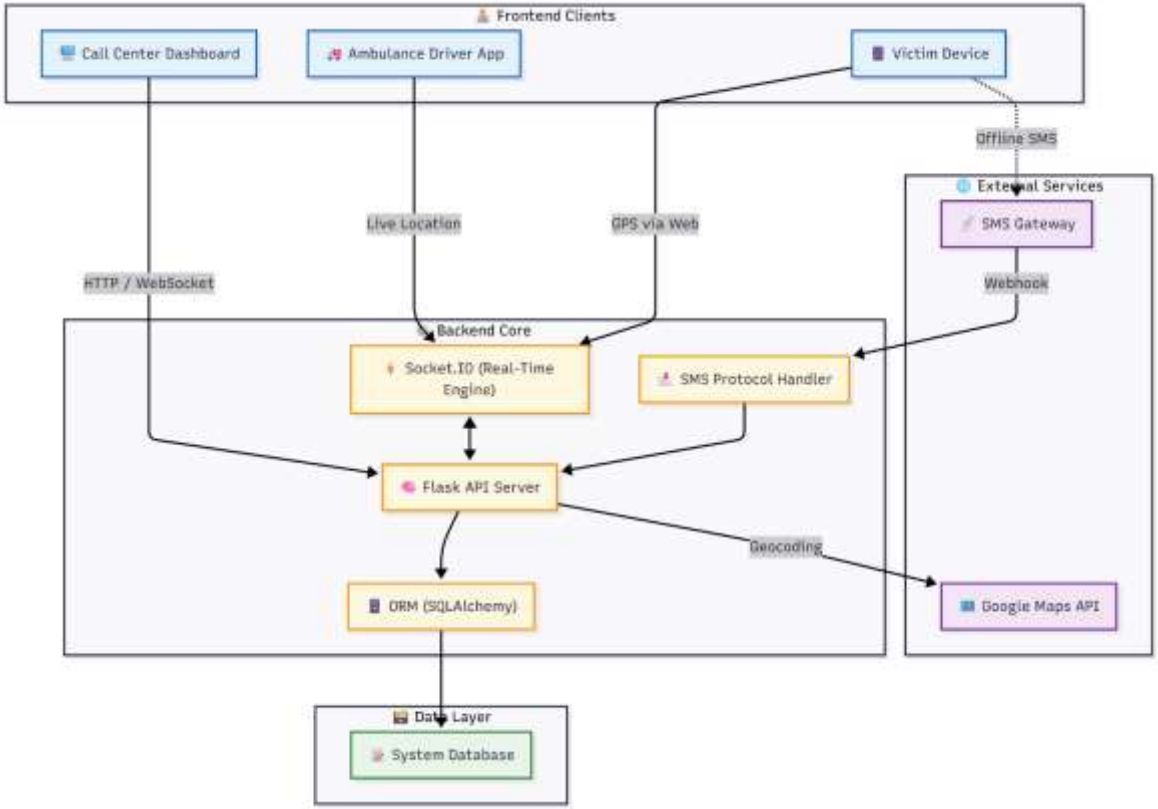
Google Developer Group
On Campus

Process flow diagram



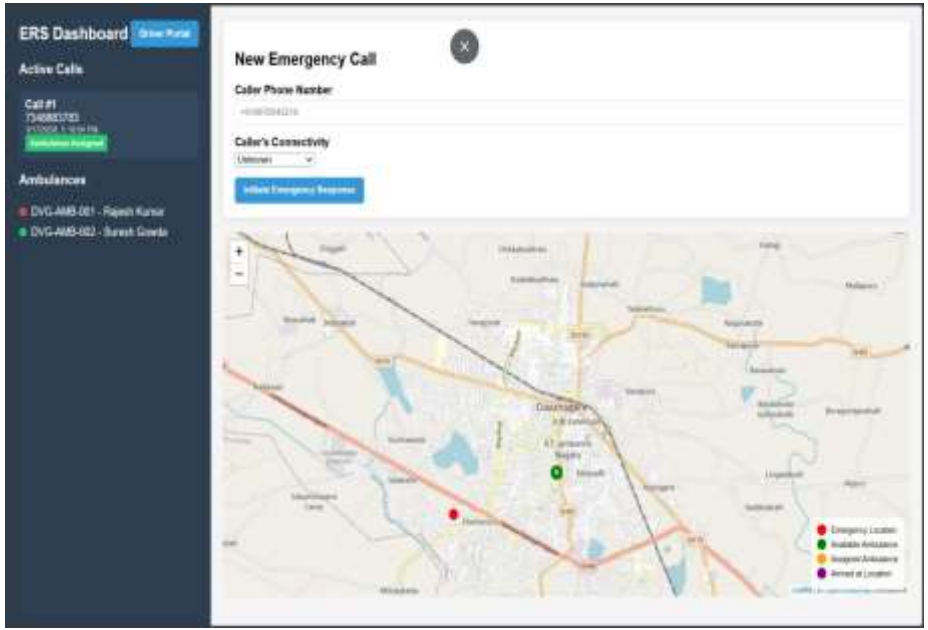
Google Developer Group
On Campus

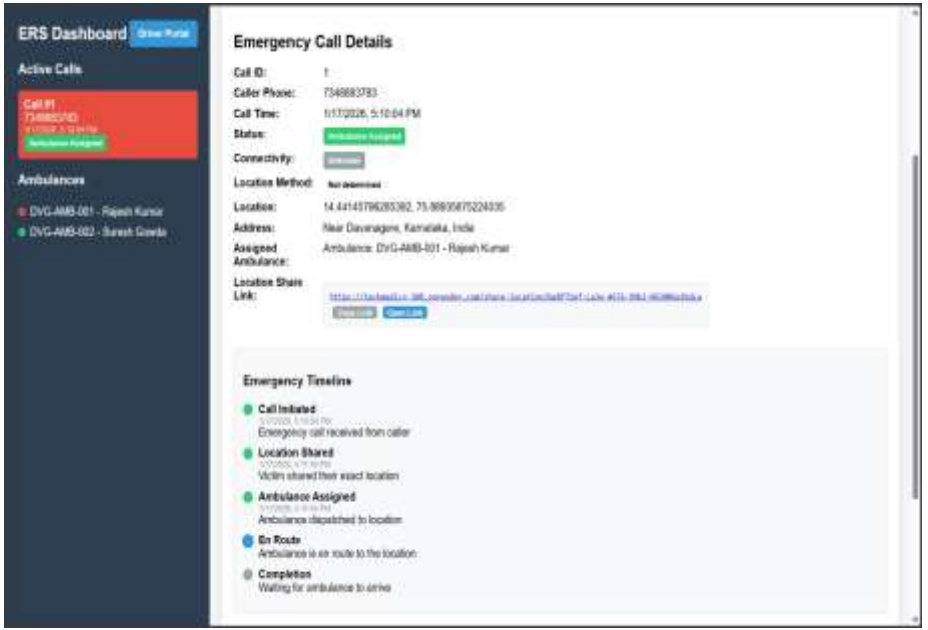
Architecture diagram of the proposed solution



Google Developer Group
On Campus

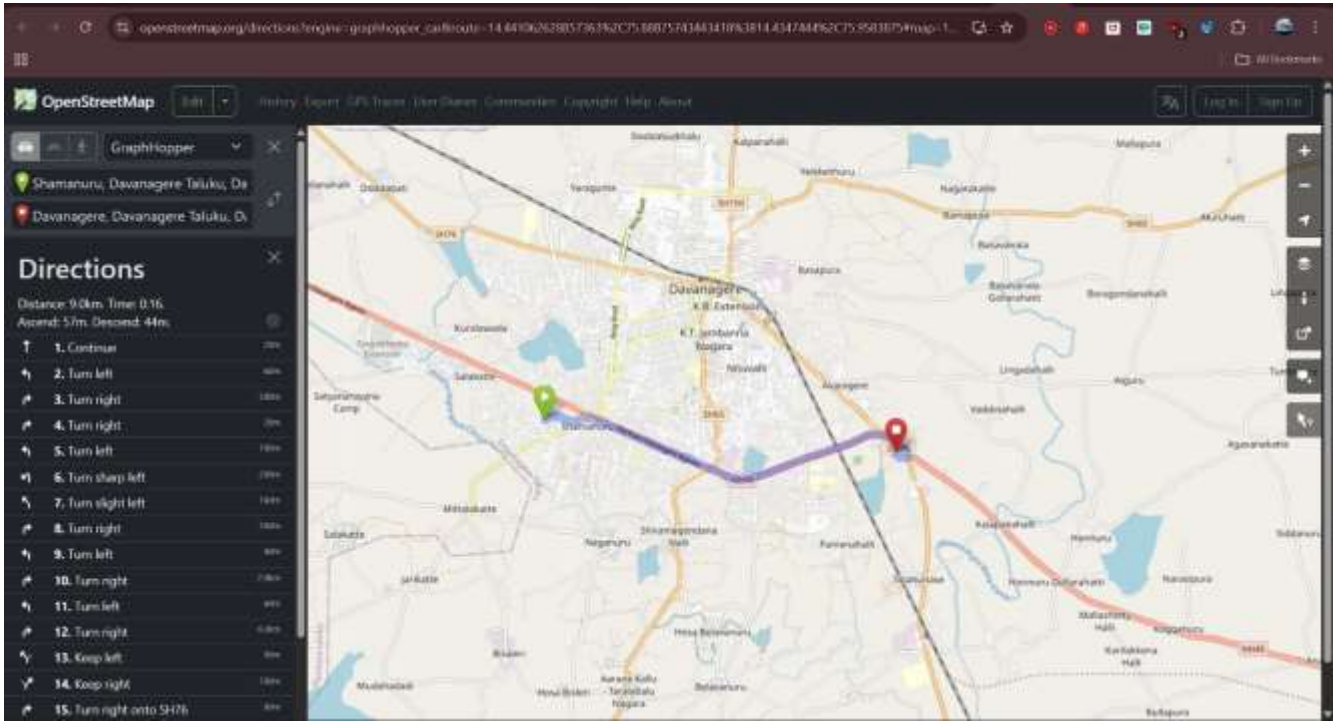
Snapshots of the MVP





Google Developer Group
On Campus

Snapshots of the MVP



Google Developer Group
On Campus

Future Development

AI Predictive Deployment
Uses historical accident data to pre-position ambulances in high-risk zones, cutting response time significantly.

Smart Traffic Integration
Enables automated green corridors by syncing with Smart City traffic signals for faster ambulance movement.

Vernacular Voice Assistance
Provides hands-free, AI-powered voice support in regional languages for rural and highway drivers.

Smart Ambulance (IoT Telemetry)
Streams real-time patient vitals to hospitals enroute, allowing emergency teams to prepare in advance.

Google Developer Group
On Campus

Provide links to your:

1. **GitHub Public Repository**

link : https://github.com/Suryareddy180/108plus

2. **Demo Video Link**

link : https://drive.google.com/file/d/1XYbmHxfMWaXSHama5ysZLa_DLliKNXnn/view?usp=sharing

3. **MVP Link**

link : https://techmedics-108.onrender.com/

Google Developer Group – NIST
On Campus

ATLAS – GDG OnCampus Hackathon

Thank you!