ITPV302 Project - OmniSolutions

# Problem domain

Local neighbourhoods and small communities often lack a unified, user-friendly, and reliable platform for reporting suspicious activity or crimes. Reports are likely to be scattered across social media, SMS groups, and informal WhatsApp chats, resulting in slow responses, duplication of efforts, loss of evidence (such as photos and locations), and poor record-keeping for authorities and community watch groups. This division makes residents feel less safe and makes it harder for police to identify patterns or act quickly**.**

A digital platform that combines reports, keeps evidence, offers geographical context, and facilitates future actions would enhance community safety, reduce response times, and establish a verifiable record for crime prevention and law enforcement.

# Proposed solution

A mobile application designed to enable community members to swiftly report incidents using text, photos, and automatic GPS tagging. The platform will feature three primary user roles: Residents (the reporters), Community Moderators (neighbourhood watch/community administrators), and Authority/Staff (local police /municipal safety officers).

## Key capabilities:

* **Crime Reporting:** Residents can notify other neighbours of any crimes or suspicious activity with text/photo/video and/or GPS location, and an optional anonymity toggle.
* **Camera access:** take pictures or videos with location tagging for authenticity.
* **Real-time Alerts & Broadcasts:** moderators or authorities can send area alerts (email/SMS/push) to residents, vice versa.
* **Mapping view:** A heatmap showing incident hotspots (with privacy protection) for the public, and a detailed map with exact incident locations and full information for moderators.
* **Silent Tap Emergency Trigger:**  This button instantly alerts the police and the neighbours without drawing any attention.
* **Security/Privacy**

# Screens / System functions

* About
* User registration and login (with role selection and verification)
* Report submission (quick mode and detailed mode)
* Elder check-in (for community members to check on the elderly living alone)
* Public safety tips
* Silent Tap Button (Button to alert ongoing crime)
* Camera/gallery photo upload (mobile-friendly)
* Map view (public aggregated heatmap and internal detailed pins)
* My Reports (user can view/track their submitted reports)
* Home Screen/ User Dashboard
* Moderator Dashboard (case assignment, evidence review, communication)
* Authority Dashboard (advanced search, analytics, export)
* Admin area (user management, roles, system settings)
* Reports page (generate PDF/CSV reports)
* Help & FAQ

# Development technologies

* Frontend: React Native
* Backend: Node.js + Express, or Python (Django/Flask) or ASP.NET Core or Firebase
* Database: MySQL or SQLite