

ALERT: Empowering Safety, Instantly

A minimalist App for Maximum Protection

Aashis Jha

Tackling Social Issues with Technology

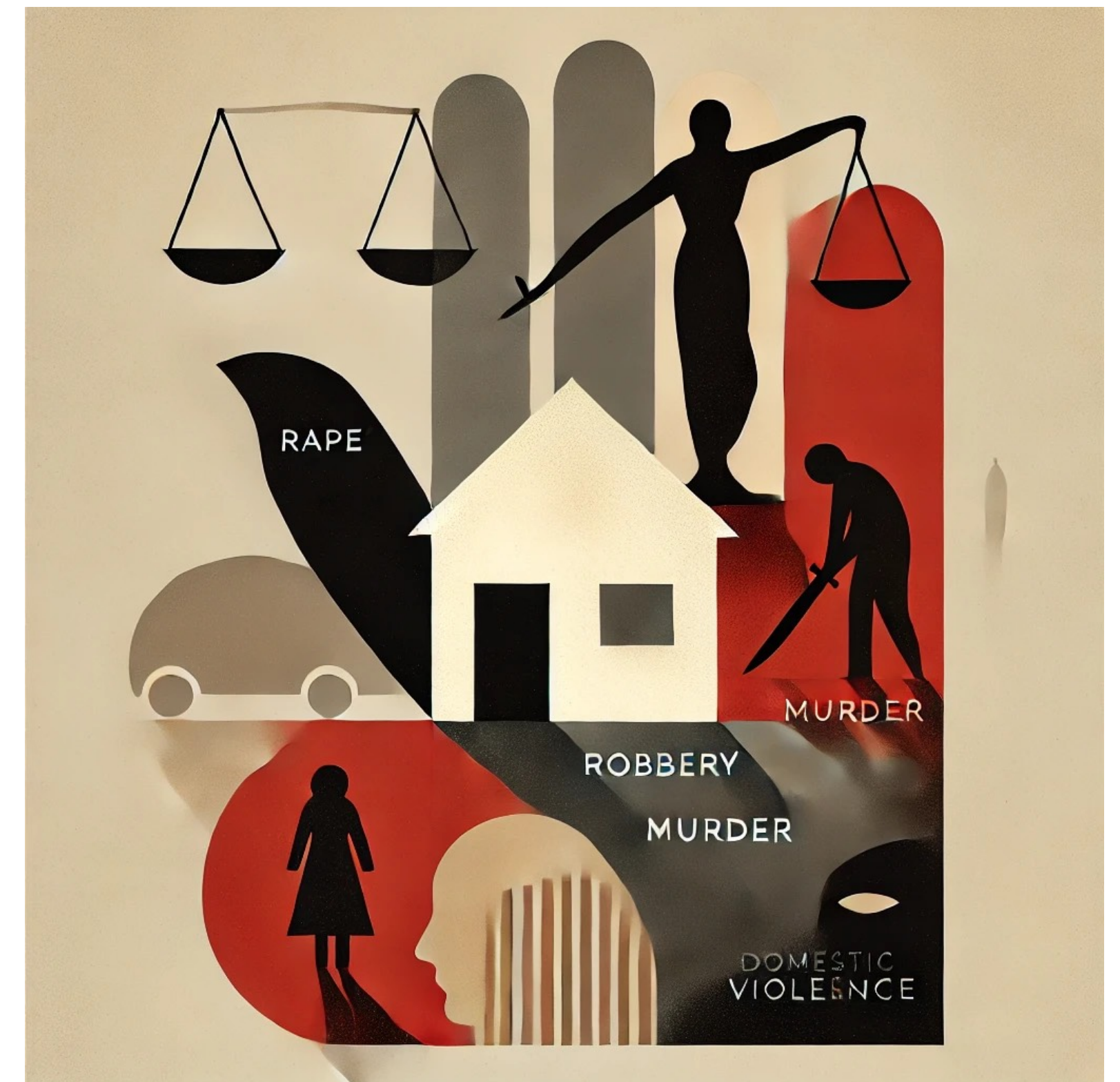
A Case Study of 'ALERT'

Content

Current Scenario

- Rising global crimes: rape, robbery, murder, domestic violence.

In the modern era, crimes such as **rape, robbery, murder, and domestic violence** remain critical global issues. Despite efforts to combat these crimes, the numbers show a persistent and alarming rise.



Statistics on rape and murder cases in Nepal, India, and globally

Statistics on Rape Cases:

- **Nepal:**
 - 2014-15: 981 cases
 - 2018-19: 2,230 cases
 - 2019-20: 2,144 cases
- **India:**
 - 2020: ~28,000 cases
 - 2021: ~32,000 cases
 - 2022: ~32,000 cases



Statistics on Murder Cases:

- **Nepal:**
 - 2014: 558 cases
 - 2020: 697 cases
 - 2024 (up to December 25): At least 192 murders in the first four months alone.
- **India:**
 - 2022: ~30,000 cases
- **Worldwide:**
 - 2024: Approximately **450,000 murders** reported.

These figures underscore the urgent need for innovative solutions to address and mitigate crime.



The Solution: Introducing 'ALERT'

ALERT is a cutting-edge software designed to enhance personal safety and reduce crime rates. It employs **real-time monitoring, geolocation, and communication technologies** to provide immediate assistance during emergencies.



Development Focus

Cross-Platform Excellence

Using **Flutter and Dart**, ALERT delivers a **high-performance user experience** across devices while maintaining a compact application size. With **Firebase** handling backend operations such as authentication, database management, and live updates, the app is scalable, secure, and reliable.

Key Benefits of Our Tech Stack:

- **Flutter & Dart:** Provide a consistent, fast, and native-like user experience across Android and iOS with a single codebase.
- **Firebase Integration:** Offers robust real-time database capabilities for seamless live location sharing and instant notifications.

Why It's Extraordinary:

This approach reduces development time and ensures frequent updates with minimal downtime, catering to a global audience at scale.

Features of ALERT

1. Activation Mechanisms:

- **Voice Activation:** Triggered when keywords like "help" or "alert" are recognized.
- **Manual Activation:**
 - Write "alert" or "help" on the locked screen.
 - Double-tap the volume-down button.



2. Key Functionalities:

- **Instant Alert Messaging:** Sends an alert message to nearby police stations and registered contacts within a **500m to 1km radius**. A minimal charge (e.g., **Rs. 1** from the SIM card) ensures efficient operations.
- **Live Location Sharing:** Shares real-time location with individuals within a 1km radius. The app includes an **offline map feature**, automatically downloaded during installation, to ensure functionality without an internet connection.
- **Video Streaming:** Activates the phone's camera and sends live video footage to authorized personnel, such as police, when online.
- **Silent Mode Activation:** Silences the phone automatically to avoid detection by assailants.

3. Error Handling:

If the system is activated mistakenly:

- A **voice command from a pre-registered person** can deactivate the alert within a minute, ensuring no forced cancellations.

Additional Innovations (Future Scope):

- **Wearable Devices:**
 - Development of a **smart wristband** equipped with:
 - Heartbeat monitoring for detecting stress or panic.
 - Integrated GPS for precise location tracking.
 - Automatic sound alerts in case of emergencies.
- **Enhanced Business Model:**
 - Minimal charges deducted from SIM cards for activation, ensuring affordability and widespread accessibility.

Visual Demonstration:

A **video demonstration** showcasing ALERT's real-world application will highlight its ease of use, efficiency, and impact on crime reduction.

Social Impact

By merging **artificial intelligence, geolocation technology, and human-centric design**, ALERT aims to create safer communities. This tool empowers individuals, especially vulnerable groups, by providing immediate access to help and reducing response times during critical situations.

With further development, ALERT has the potential to become a **global standard for personal safety**, helping governments and communities tackle crime effectively.

Sustainable Development Goal

The ALERT initiative strongly aligns with key United Nations Sustainable Development Goals (SDGs) to create a safer, more resilient society:

1. **SDG 3: Good Health and Well-Being**

- Reduces physical and mental harm caused by violence by providing rapid assistance and peace of mind.

2. **SDG 5: Gender Equality**

- Empowers women and vulnerable groups with a reliable tool to ensure safety and protection, addressing issues like harassment and assault.

3. **SDG 11: Sustainable Cities and Communities**

- Enhances public safety and fosters a culture of mutual vigilance, making cities more inclusive and secure for all residents.

4. **SDG 16: Peace, Justice, and Strong Institutions**

- Strengthens partnerships between citizens and law enforcement through real-time alerts and evidence-sharing capabilities.

By integrating cutting-edge technology into daily life, **ALERT** not only saves lives but also contributes to building a future where safety is a fundamental right for all.



Business Aspect

Revenue Model: Minimal activation cost (e.g., Rs. 1) deducted from the SIM card during emergency use.

Future Products: Expansion into wearable tech, such as smart wristbands with GPS, heartbeat sensors, and sound alerts.

Scalability: Potential for global adoption through multilingual support and cross-platform functionality.

Market Potential: High demand for personal safety solutions in urban areas and among solo travelers.

