

# Emergency Call App

**Abstract:** The Women's Safety Emergency Call App is an application that seeks to help women who face emergency situations during the night. One of the important functions of the app is the one-tap to make a call to the emergency services, where one can easily dial a local authority or other important persons. In addition, there is a feature that sends the user's position in maps through SOS messages to selected recipients so that there can instant assistance. Users can also turn on an alarm sound or a flashlight to get attention in dangerous situations and a shake-to-alert modality can be used to mobilize emergency operations without having to unlock the phone. The application includes a disruptive rather helpful aspect of fake calls to assist users in situations they wish to escape from and a safety timer that sends alerts if it is not disabled after a certain time. This app has also eliminated constraints of users trying to search for information about nearby police stations which gives users a sense of safety. The target of this type of application is women in particular, because their focus is to ensure their safety at the most unprotected and vulnerable time. Security is the main focus in designing this application with a strong emphasis on ease of use and protection of the user's data within the Android platform.

## **Problem Statement:**

1. **Safety:** There are a variety of challenges that women have, whenever they are commuting, especially during the night or in lonely places.\*\* They include harassment, stalking as well as sexual violence. Most safety options which include making a phone call or contacting other people are not enough especially when things have heightened within no time.
2. **Accessibility:** The interactivity and usability of panic buttons for example, who to call, where to send your location is lost when people are under succumbing pressure. Quick measures that could help achieve the situation faster is lacking.
3. **Reliability:** Moving forward the existing solutions are not usually usable or there is lack of integration to facilitate delivery of reliable and timely help. For instance, it does not permit automatic starting when moving of sending an alert to some preset contacts along with GPS location to ensure safety of children.
4. **Response Time:** Time lost while making calls to either emergency services or calling someone considered trusted ideally affects the risk. Manual processes or slow responses due to lack of proper tools increase the chances of danger being faced.

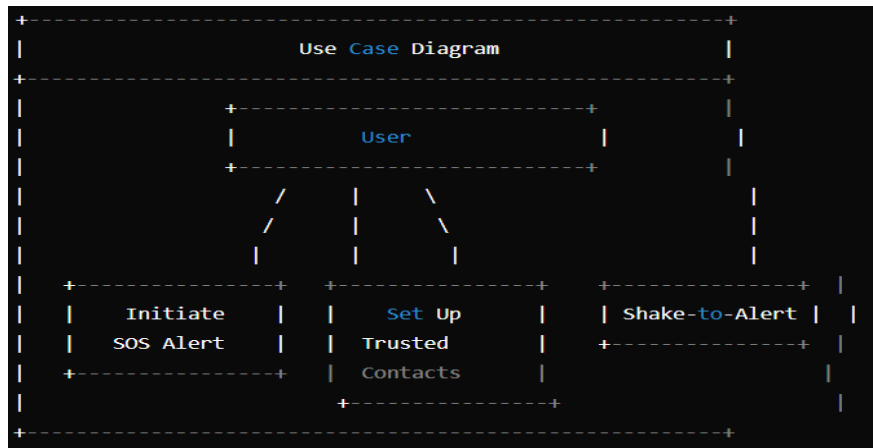
**Team Members: -**  
**Priyanshu Sharma**  
**Shubh Dhariwal**  
**Vivek Kumar**

**Proposed Solution:**

A new safety mobile app which targets the female population is proposed and this application seeks to address the need for help during emergencies happening during the night in a fast, easy, and dependable way. The app provides an emergency services' dialer that allows the users to call the police or their trusted contacts with a single button. It also contains an SOS alert that transmits the real-time position of the user to chosen contacts. To provide this preventive service, the user must send out alerts to known and trusted contacts when people are feared for their safety. To boost the user friendliness of the application, the application has incorporated a shake-to-alert application that allows the user to initiate all system alerts without unlocking the phone. Also there is an escape from adverse situation where one feels uncomfortable over a phone call and a device which triggers warning after a certain period is over whereby check in has not occurred. Nevertheless, it is also going to have flashlight and alarm function to further attract attention of people in an emergency from the user. While applicable on any smart phone operating system the application effectively incorporates privacy concerns into the design as well as the interface to reduce anxiety as far as actions in dangerous settings are concerned. All these sophisticated mechanisms enable to speed up the response, protect women and clearly promotes their willing to go outside when it is dark.

**Use of Vultr services:**

The application or the women safety app can benefit from Vultr Cloud Services as a reliable to scalable and capable of handling sensitive data securely. The backend as well as the APIs could be hosted on Vultr Cloud Compute which allows real-time sharing of location data while Object Storage for real-time storage. Push notifications and SOS alerts are improved by Load Balancers and auto-scaled to perform well during heavy traffic. Vultr Firewall and DDoS Protection protect the user data while fighting against cyberattacks. Scalability of applications can easily be done through the Kubernetes Engine while Snapshot Services support backup and restoration of data. Being a pay-as-you-go service provider, Vultr allows Anderson to scale the app as it spreads but on a low budget.



### Expected Outcome:

The team has to make sure the application is convenient to use right as an emergency call can be made immediately, current location can be shared, and discreet functions maybe performed with success yet, privacy of the women is maintained and the overall community is encouraged to contribute to making the application popular and improved upon.