

# Capstone Project Proposal



Submitted By :-

Akshat Dogra - 101917023  
Harshita Gupta - 101917125  
Kavya Jaswani - 101917179  
Ritik Rajdev - 101917014

~ BE Third Year  
Computer Science and Engineering

# Hifazat ~ Saving Lives

## Proposition

**Hifazat** is an application with a purpose to **save lives**.

Whether you are in some danger or caught by an accident, a scream is what you'll need to save you.

How will Hifazat save lives ?

Hifazat uses a ***scream detection technology*** that detects your scream and informs your trusted contacts, as well as Police depending on the results it draws by analyzing the type of scream and time of response.

## Problem Statement

As per the statistics, each year approximately **1.3 million** people lose their lives due to road accidents.

Rape is one of the most common crime prevailing against women in India. According to the 2019 annual report of the National Crime Records Bureau (NCRB), **32033 rape cases were registered** across the country.

You may wonder, why are we writing those factual lines? The reason behind this is that we want to lessen the number of deaths and damage caused by these incidents.

Whether it's domestic violence or rape or accidents or any other form of life threatening incidents , our aim is to save lives.

## Observation

One of the most frequent scenarios in these situations is a victim screaming.

Therefore, we aim to use these screams as a method to identify the people in need, and hence increase their chances of being rescued.

## Proposed Solution

We propose a cross-platform application that aims to reduce this problem and inform faithful contacts or local police.

## Steps Involved

- On startup, a daemon will observe the environment.
- Whenever a scream is detected, daemon will contact the app.
- Our app will categorize the scream on the basis of certain emotions.
- If the scream is classified as of the one in danger or hurt, this app will record a voice clip of 10 seconds.
- This voice clip is then sent to contacts appropriated by the user.
- These users can contact the Police or Ambulance or cancel the action, after listening to that voice clip, using provided buttons.
- In case of no action in 30 seconds, our application will automatically call the police station.

Now that the Police have been informed the chances of rescue can be increased dramatically.

## Features

- Along with the voice, it will send location to the police as well as to the trusted contacts.
- Cross Platform Application
- Can work in offline mode

## Tech Stack

- **Flutter** - for **Cross Platform Application** building
- **Python** - for building **Scream Detection Model**.
- **Neural Networks, Machine Learning** for **Scream Detection and Classification**.