Manipal Hackathon

Theme: Crimes against Women

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Problem Statement:

- More than 3 lac crimes against women are registered each year in our country. There has been a sharp increase in reported sexual assaults in the last decade itself. This is a major setback for our society and for the welfare of women, and it is the need of the hour to curb such a mentality. Research on the statistics and design a solution to tackle this issue in the urban areas of the country, such that crimes can be prevented and help can be dispatched to the people in need, in time.

Idea Overview:

Idea description:

Since the crime rate against women is increasing at an alarming rate, we propose to develop an app that will provide help to those in need. The key features of our app will be as follows:

- **Trigger Words :** The user will set some unique keywords and provide voice samples for unique voice recognition. The keywords will be entities on which our ML model will be trained. When these intents are detected in the user's voice, a trigger will be activated. The app will be running in the background. Incase of an emergency, the user can utter those trigger words and the trigger will be activated.
- **Trigger Sense+Button :** After setting a specific fingerprint for the trigger, scanning it shall activate the trigger which can be deactivated within 5 seconds (if done by mistake) by scanning with the registered finger again. For devices that do not have fingerprint scanner or if the fingerprint is not recognised, pressing the power button (3 times) shall generate a trigger.
- **Geo-Fence :** A geofence will be created around the user. The geofence will create a virtual geographic boundary defined by GPS.The nearby concerned authorities(police stations , NGOS) will be notified. Also the user's emergency contacts will be notified, sharing the user's live location and SOS alert.
- **Video + Voice Recording :** On receiving a trigger(Camera autostarts), the camera of the user's phone will be activated and will capture voice/video of the crime. This is useful to capture the criminal's face or record his voice to match with the suspects.
- **Crime analysis :** The area where the crime rate is high can be analysed. So that there can be more security in such areas and a notification can be sent if women are near those areas.

Techstack:

- Cross platform app using Flutter
- Machine Learning model (Tensorflow , tflite)
- Data Analytics

Future Aspects:

- **Smart Watches:** Trigger words and images can be captured through smart watches which will be connected to the app.