

Anti-Poaching Device

Semester Project Defense

Agenda

Anti Poaching Device

Topics to be raised in today's presentation

- Brief review of our project
- How we approach to simulate it
- How our project solves problems
- Proteus simulation
- Mobile Application View
- Trained Model
- Conclusion



Brief Review of our Project

- Anti-poaching device is the name of our project, and it will be used to protect animals from injury and rescue them from poachers who are causing them suffering.



Anti Poaching device

- Detect the noise of the animal and find if its in stress
- Detect if the animal is in the geofench
- Locate the exact location of the animal
- Check the heart beat pulse rate if the animal

Brief Review of our Project(2)

Our device will have a mobile application that all the above function will be displayed.



How we approach to simulate it

We tried to simulate this project using proteus software and we designed our mobile application with the design software figma and we used Edge Impulse to train our model.

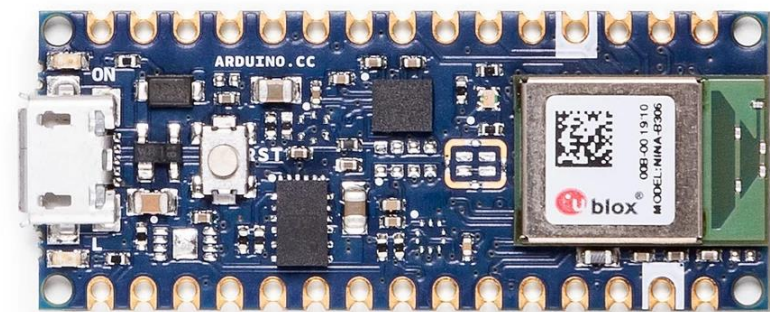
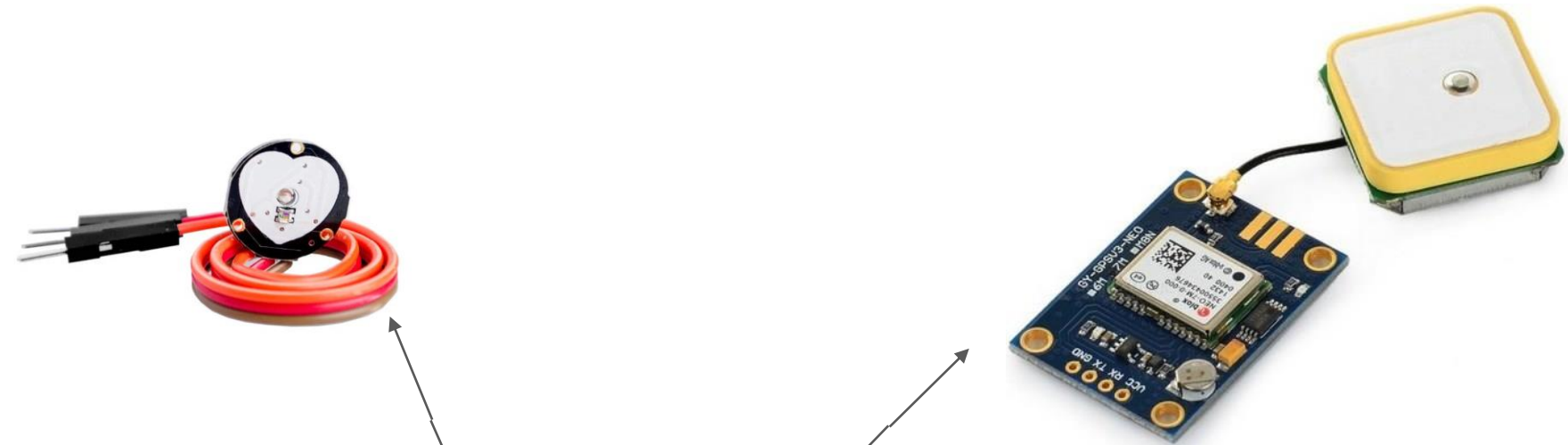


PROTEUS



**EDGE
IMPULSE**

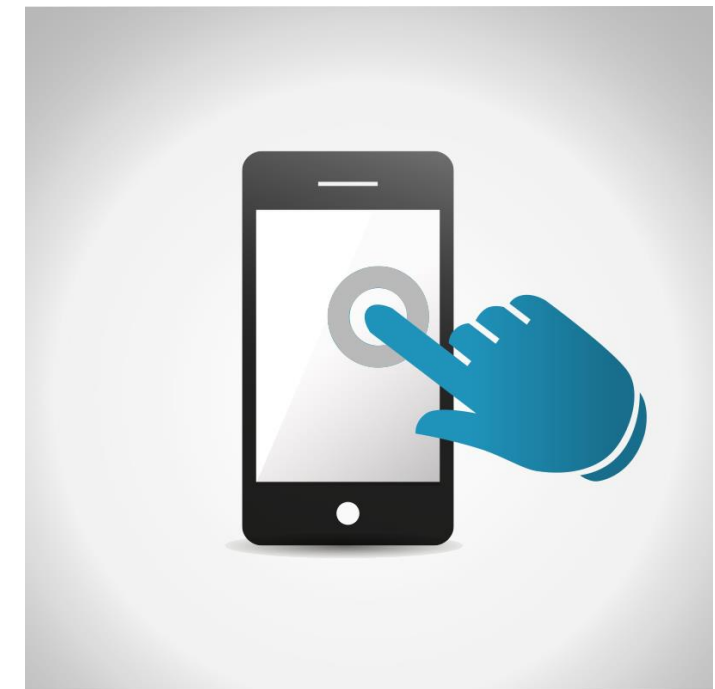
How we approached to build the device



Voice recognizer
send signal when it counters stress
And gun sound

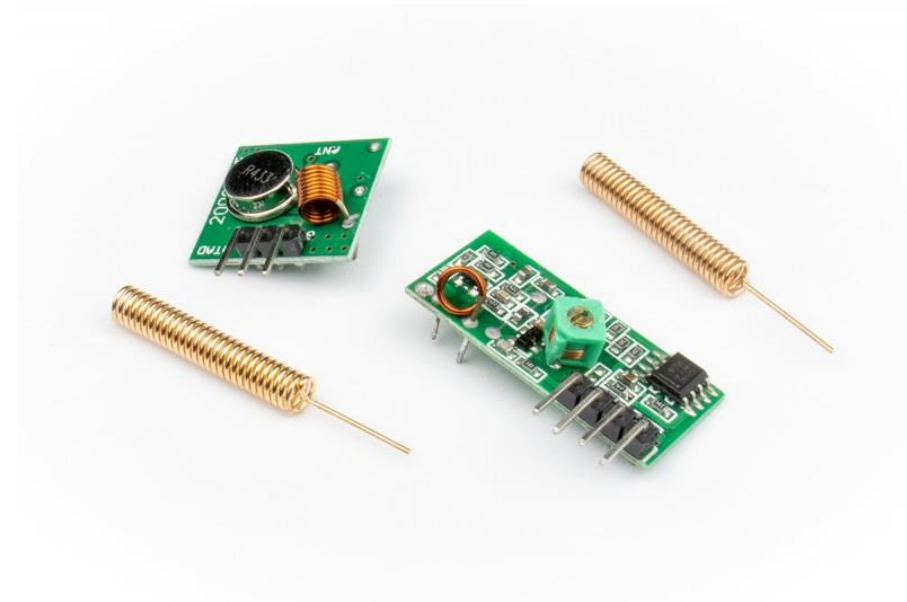


that serve as communication devices within a LoRa network between end-devices and a LoRaWAN network server (LNS). A LoRa gateway is used to **transmit sensor data from an electrical device to the cloud**

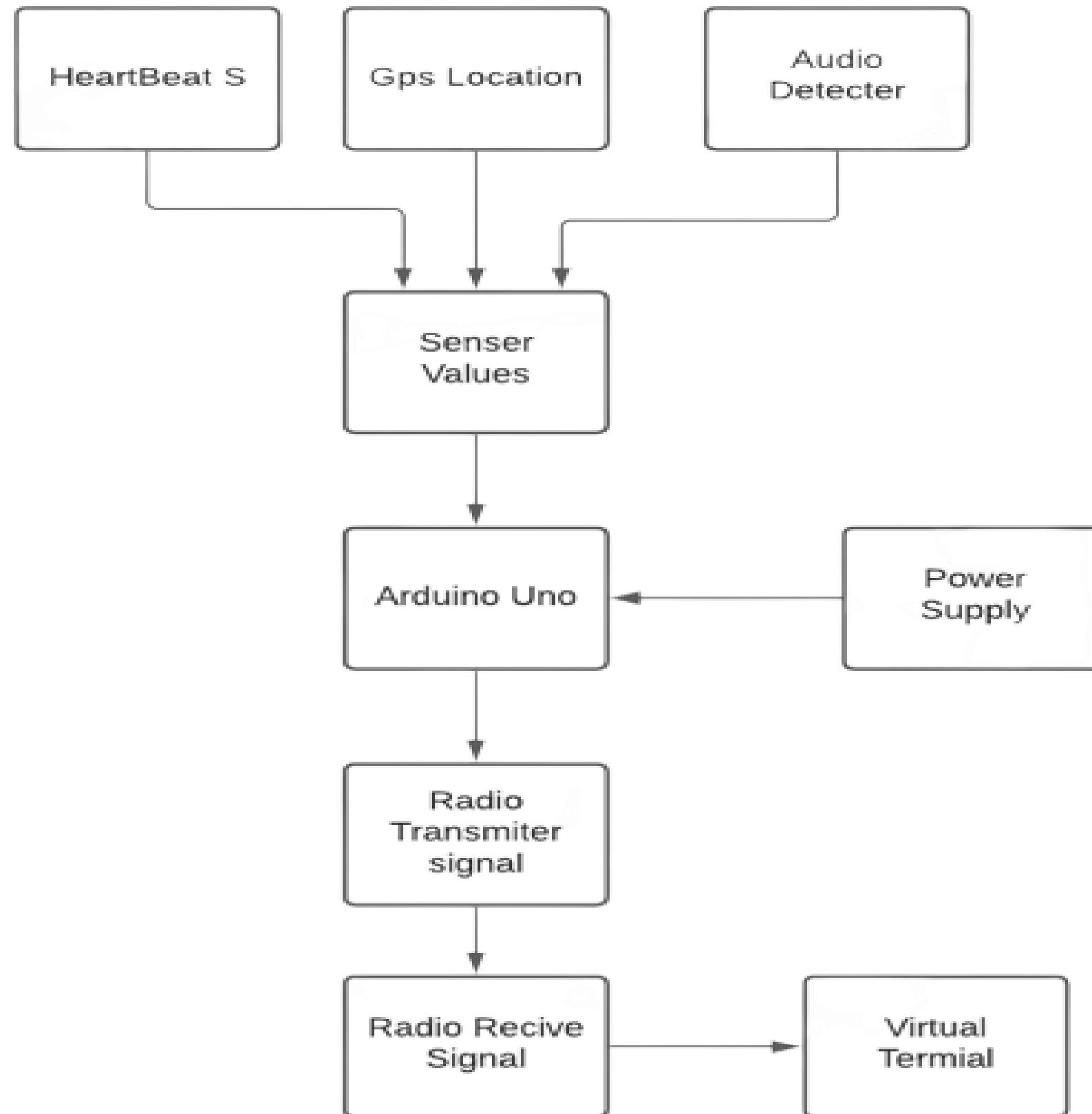


Proteus Simulation

The first is the proteus simulation this are the equipment used for this simulation to happen. This equipments are all used in the proteus software.



Proteus Simulation



This is the Block diagram of our simulation

Demo

Proteus Simulation

Mobile Application

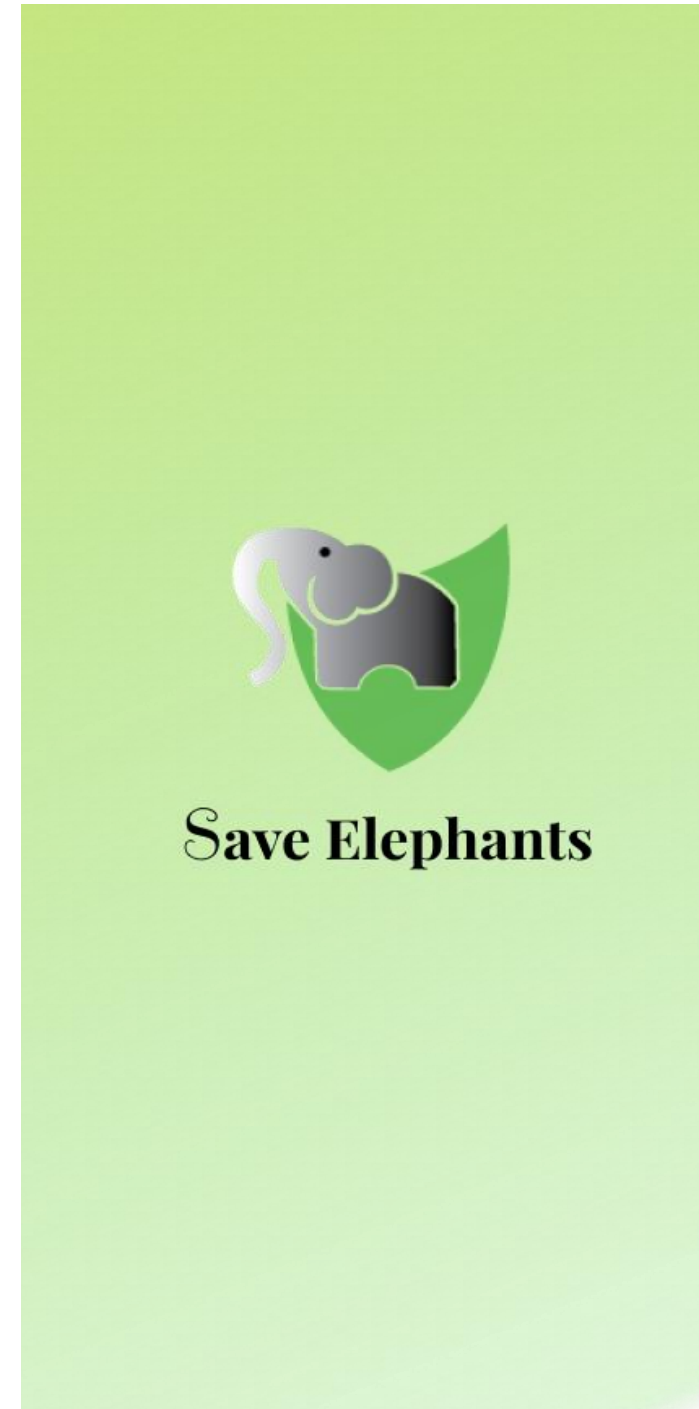
The next thing we did was we designed our software requirement and software design so we have laid out all the page of our application in the next phase we will do coding and testing phase.



Logo of our application

Mobile Application

The first page is the splash screen that will last for 3 second.




Mobile Application

The second page is the authentication page where our wildlife rangers enter their credential.



Please enter your login credential

 Username

 password

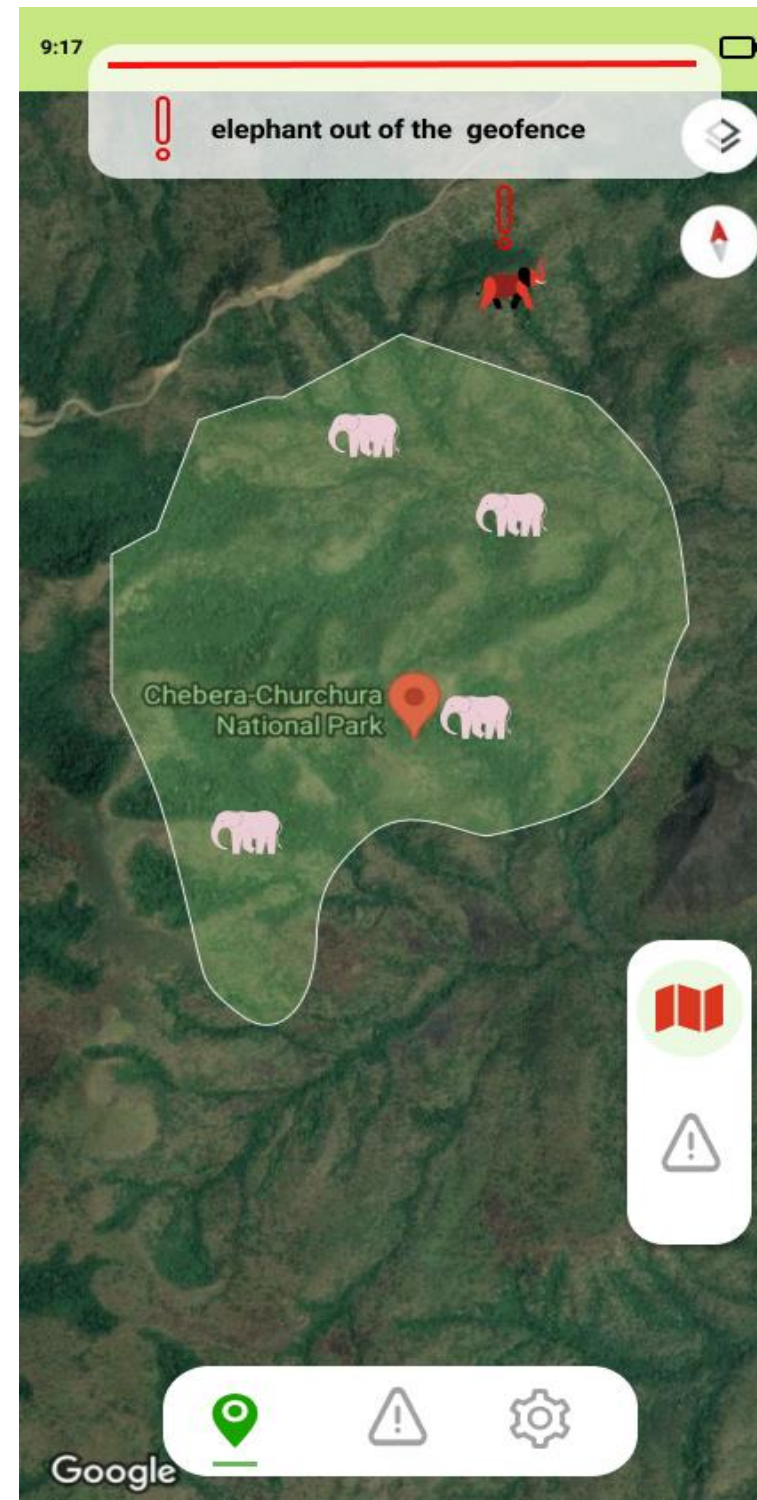
Login

Please contact your administrator if you forget your password.

Request for new password

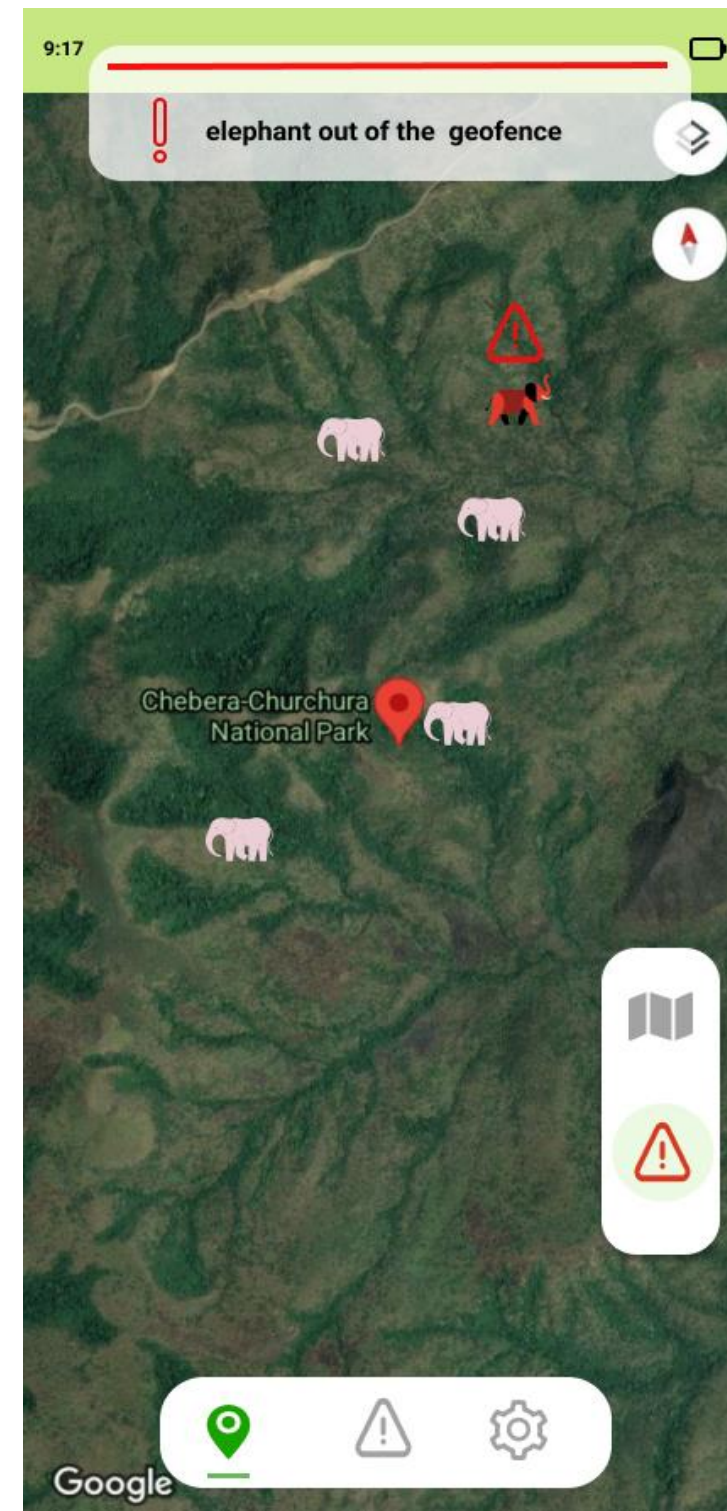
Mobile Application

After the authentication we will be directed to this home page which have a map interface



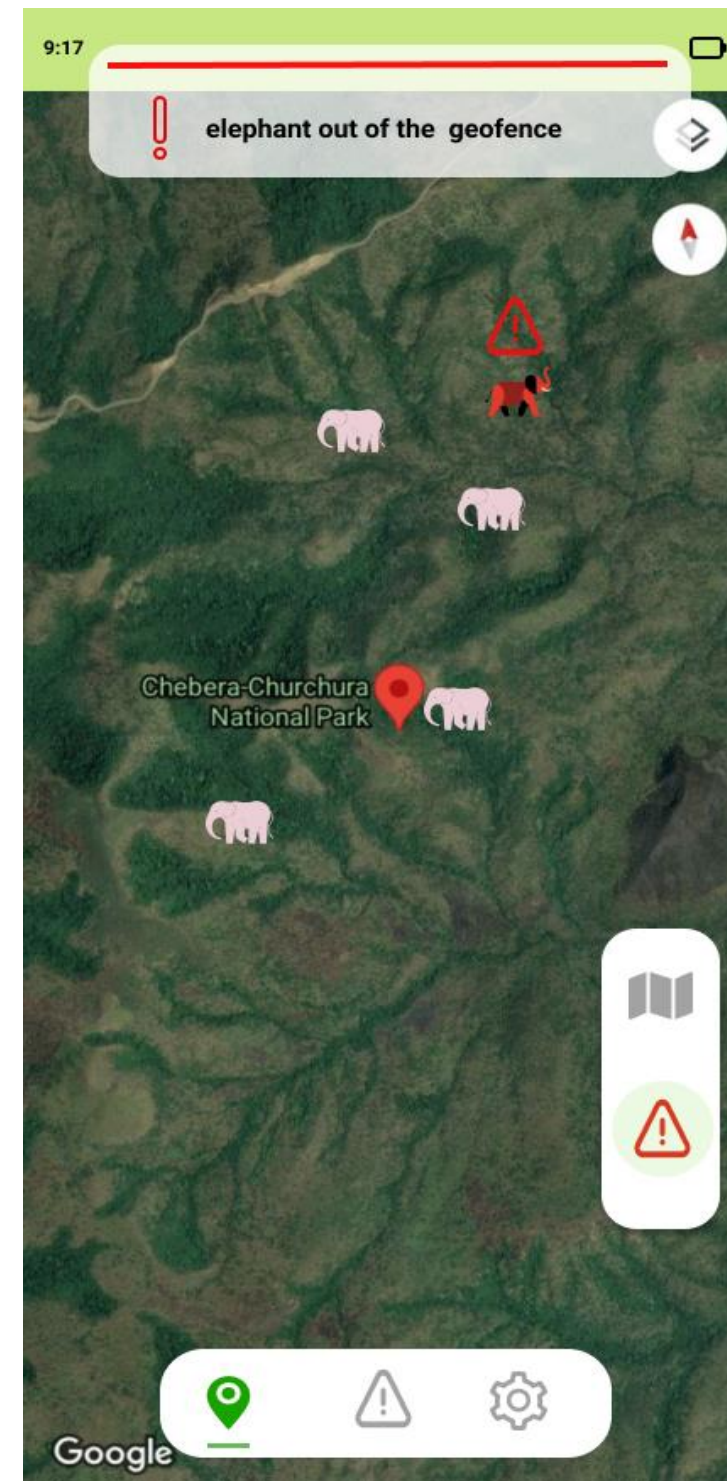
Mobile Application

This part will show if any animal is having stress sound



Mobile Application

This part will show if any animal is having stress sound

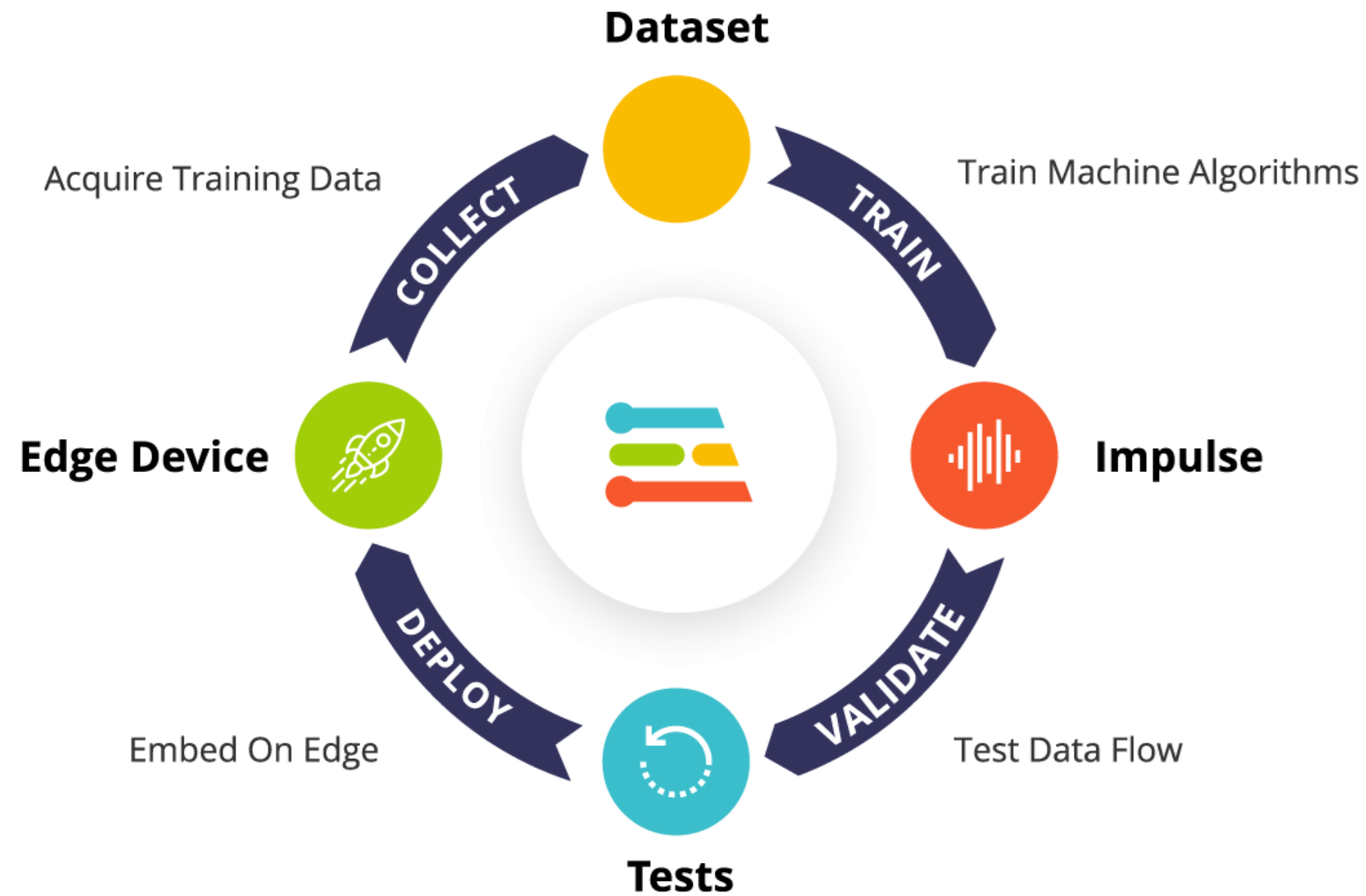


Demo

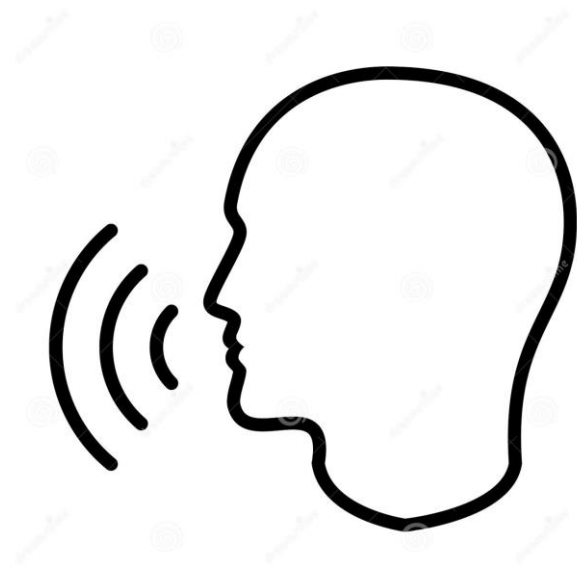
Mobile App Simulation

Trained Model

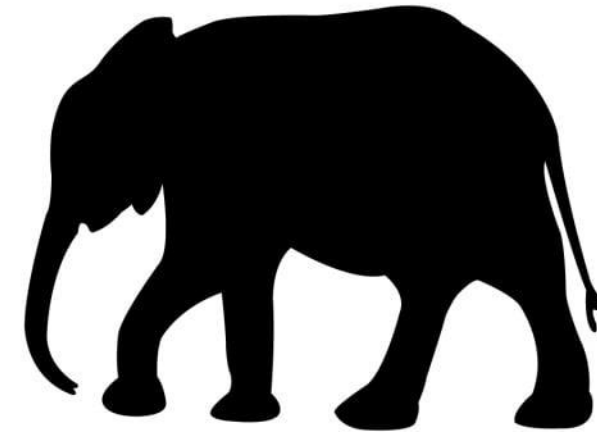
Edge Impulse is the leading development platform for embedded machine learning, It will suggest and provide models suitable for specific training .



Dataset



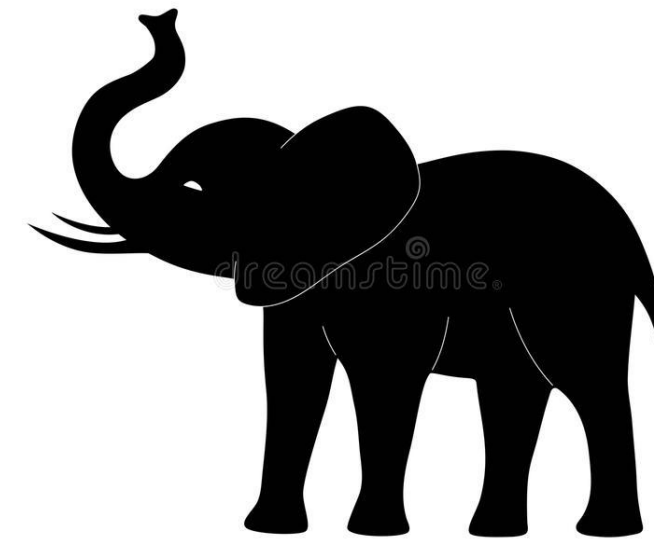
Human sounds



Normal elephant sounds



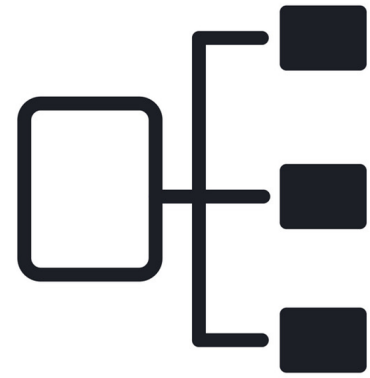
other sounds



Elephant stress sounds

Impulse

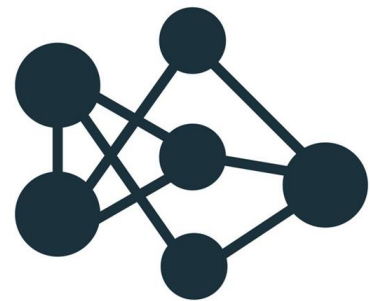
In this subsection we used classification as a machine learning method to classify and identify different sounds



CLASSIFICATION



MFCCs as a feature extractor



keras Neural network is used as an image classifier

NEURAL NETWORK

Demo

Trained Model Simulation