Naresh Vashisht Centre for Tinkering and Innovation
Indian School of Technology (Indian School of Mines) Dhanbad

Proposal Format

Minor In
Product Development
Internship

1. Project Title: EMERGENCY ALERT AND SAFETY SUPPORT SYSTEM

2. Details of the Applicant(s):

(i)	Name	BOGI MANEESH KUMAR
(ii)	Department and Year	ELECTRICAL ENGINEERING AND 1st YEAR
(iii)	Admission Number	21JE0244
(iv)	Contact detail	E-Mail: 21JE0244@iitism.ac.in
		Mob. No.: 6281361457

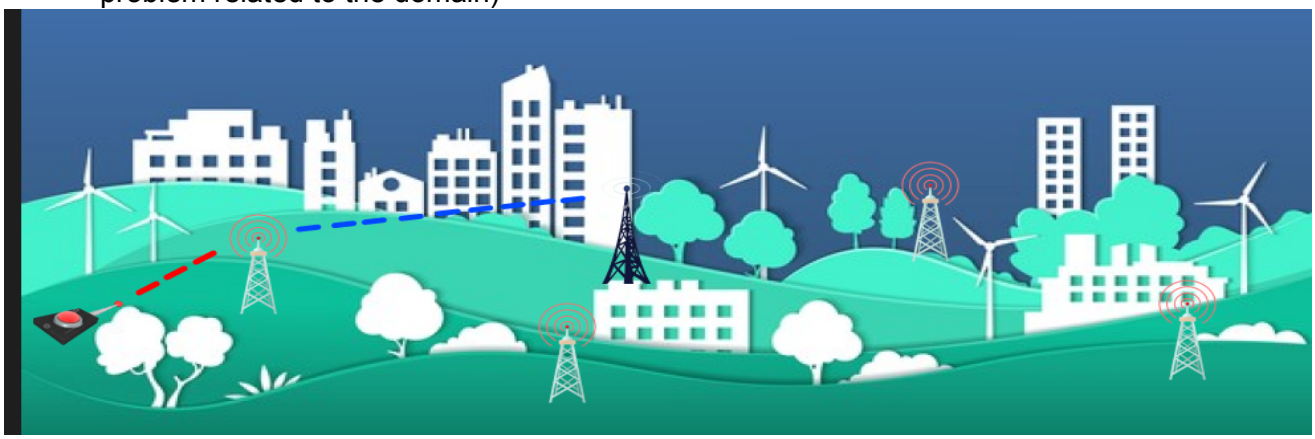
(In case of a team, please add same details for each member)

3. Faculty Mentor Details (if any):

4. Domain/Course (Please indicate one): ELECTRONICS AND IOT

i. Robotic Technology
ii. Electronics and IoT
iii. Animation and Game Design
iv. Electric Mobility
v. Aeronautics and Space Technology
vi. Smart Manufacturing
vii. Financial Technology
viii. Data and Software Technology

5. Executive Summary:
(With a pictorial view of the expected prototype)(how this idea solves the real-world problem related to the domain)



Their will be a remote present with each person and every remote will have a unique id and when ever the person is in emergency suitations he just need to press emergency buttons in remote just after pressing the button in remote(the button can be different type like button for medical emergency and for police help ..ect) then the data containing person identity and location of place in which the person present will be sent to the emergency support and the family of the person for the conformation and by using app or through the message the emergency suitation of the person will be sent as an alert to the local people for local support .In this way we develop a secure network so the person in emergency will immediately get help

6. Objectives :

➔To built communication between the emergency support (police station, hospitals) to persons in need who are in places where difficult to communicate using mobile(places where no mobile signals present in city outskirts and for women travelling alone and in suitations like floods …)

➔To send the navigation of these people in emergency to the emergency support.

➔To intimate to the family of the person in emergency and get confirmation

7. Background (Origin of the idea and state of art) :

I am always fascinated in Learning about technology ,so after attending some workshops on IOT and electronics and by browsing through internet and youtube ,I have gained some knowledge in signals and communication and mainly LORA technology and RF module inspired me a lot and I have some knowledge in arduino coding, app development and web development ,so I want to club all these knowledge together to solve any real world problem

8. Significance/Need of the Project :

This project can help the people in many emergency suitations because it may not always possible to contact people with mobile in emergency suitation because their might be no signals in some areas and phone has less battery time , battery of phone may not withstand more than few days without charging like in cases of forest ,flood suitations but the device made by us will over come all these and also it just need one click to operate no complications and its is also cheap and very less running cost

9. Technology Gap (2-3 bullet points):

➔This LORA is entirely new technology

➔The methods we are using to navigate and to resque and for secure networking With this LORA are completely cost effective and will fulfill our entire need of the project.

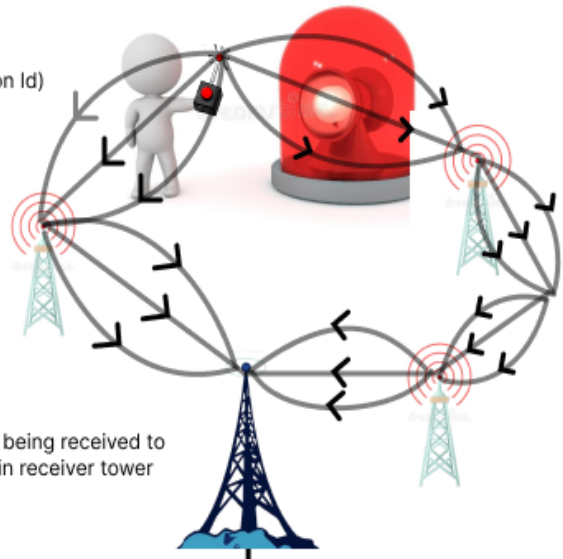
➔it can be adopted easily and efficiently into our society as of our present needs.

11. Methodology (including flow chart etc.):

When the person in emergency will operate the respective button in the remote(their will be a unique I'd to every remote to represent person)

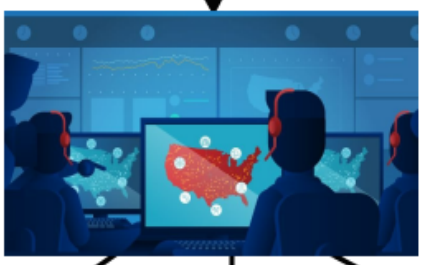
Through this remote their will be two point RF communication to tower (tower will be having an indication of red light on its top and every tower will have a unique I'd to represent tower in its location) LORA technology will be very much helpful in this.

remote send (alert signal + person Id)
after receiving data from remote
Tower send (alert signal +
person Id + tower Id)



Skip step:
If distance range is very long from main receiver tower then multiple towers needed to pass the signal to main receiver tower

Data is being received to the main receiver tower



After receiving the data from the main receiver tower their will a map created by us initially having all these towers in an area
So now by using all these IDs of towers and person I'd we can navigate to emergency point of the person in emergency

Now this data of the person and his location as a emergency indication is being send by help of
APP created by us or by using government servers a text message will be sent to

Police

Family of person

Local people near to that emergency point

RESQUE BEGINS

We need to build a safe and secure network

12. Deliverables/Outcomes (in bullet points):

➔Expose the people in emergency to the world inorder to resque them

➔Help to navigate the people location at the emergency point.

➔intimate the emergency of the person to their family..ect with the help of an app if needed

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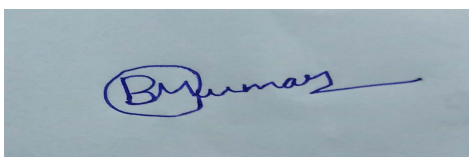
13. Select the units of NVTIL to be used (you can tick more than one unit):

i. Robotics and Automation Unit
ii. Electronics and IoT unit
iii. Animation and Game Design unit
iv. Mechanical and Rapid prototype Unit
v. Battery Pouch Cell Assembly unit
vi. Any other lab of the institute (specify)

14. Please specify the role and responsibility of each team member in the context of the project: I am Bogi Maneesh Kumar individually responsible for complete project

15. Expected Expanses:

S. No.	Head	No.	Expected total cost (INR)
i.	Minor tools/hardware (component wise details)	Arduino boards LORA module(receiver and transmitter) chip sets Push buttons Antennas ESP32 boards Leds Soldring machine Jumper wires ..ect	9000
ii	Consumables (with details)	PCB Glue gun..ect If needed Some subscriptions to design a good app	500
iii	Miscellaneous		
		Total	9500



Name and Signature of the applicant(s): BOGI MANEESH KUMAR
Name and Signature of the faculty mentor (if any):