Smart Lightning Prediction and Alert System

Theme- Environmental Challenge.

Team Name: Dexterous Squad.

Member Details:

Member 1- Ankit Pandey
Member 2- Archana Prajapati
Member 3- Amrit Chandra Kumar
Member 4- Swati Kumari Gupta

PROBLEM STATEMENT :

01

Lightning accounts for most of the casualties caused by natural calamities as claimed by IMD statistical data-death
rate: 0.25 per million population per year in India. (1979-2021).

02

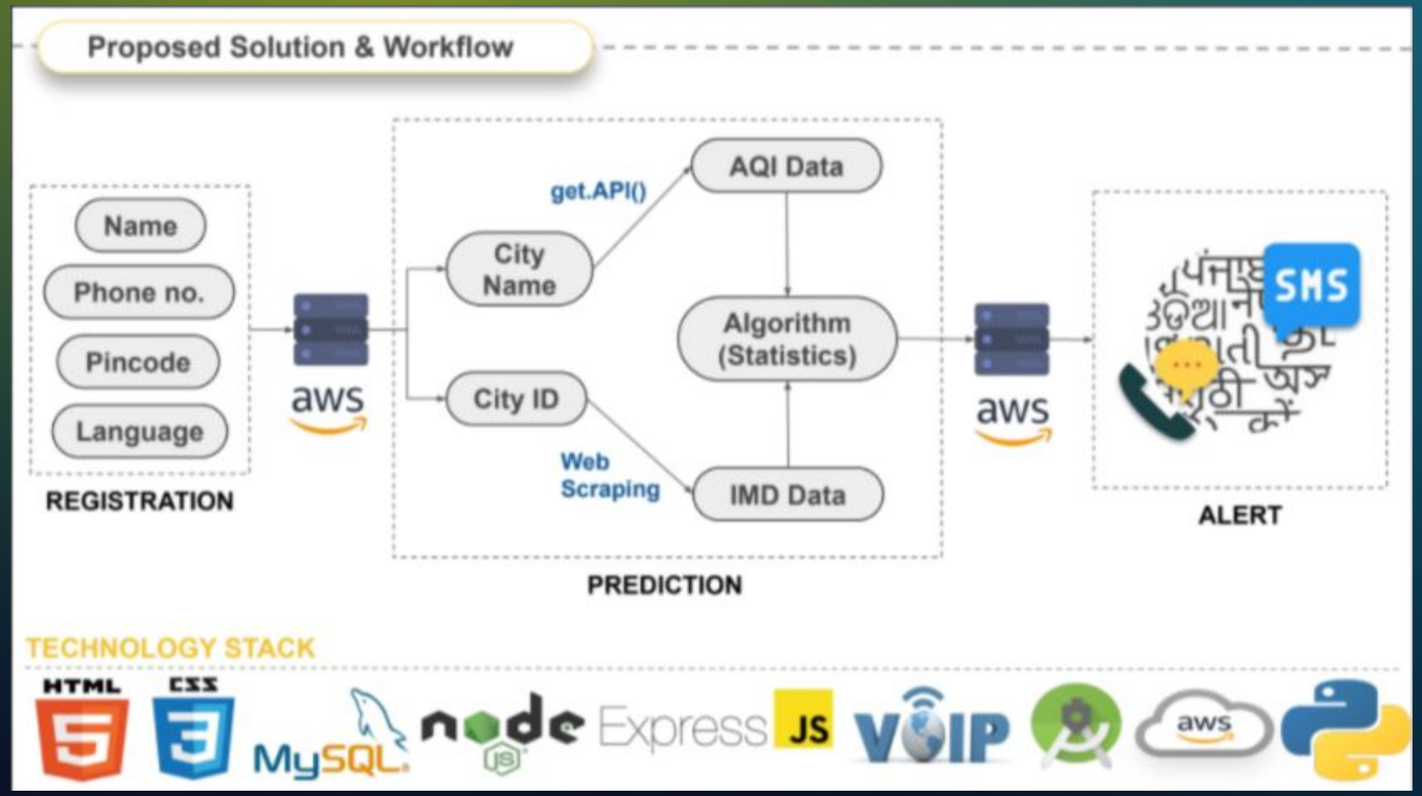
People who use smartphones benefit from Damini(made by IITM) but our target audience i.e the farmers who work on the field are unable to use Damini or other such services, making them prone to danger.

03

According to recent data, we can say that the mortality rate of farmers has increased in recent years due to lightning, so farmers are at higher risk.

WORKFLOW

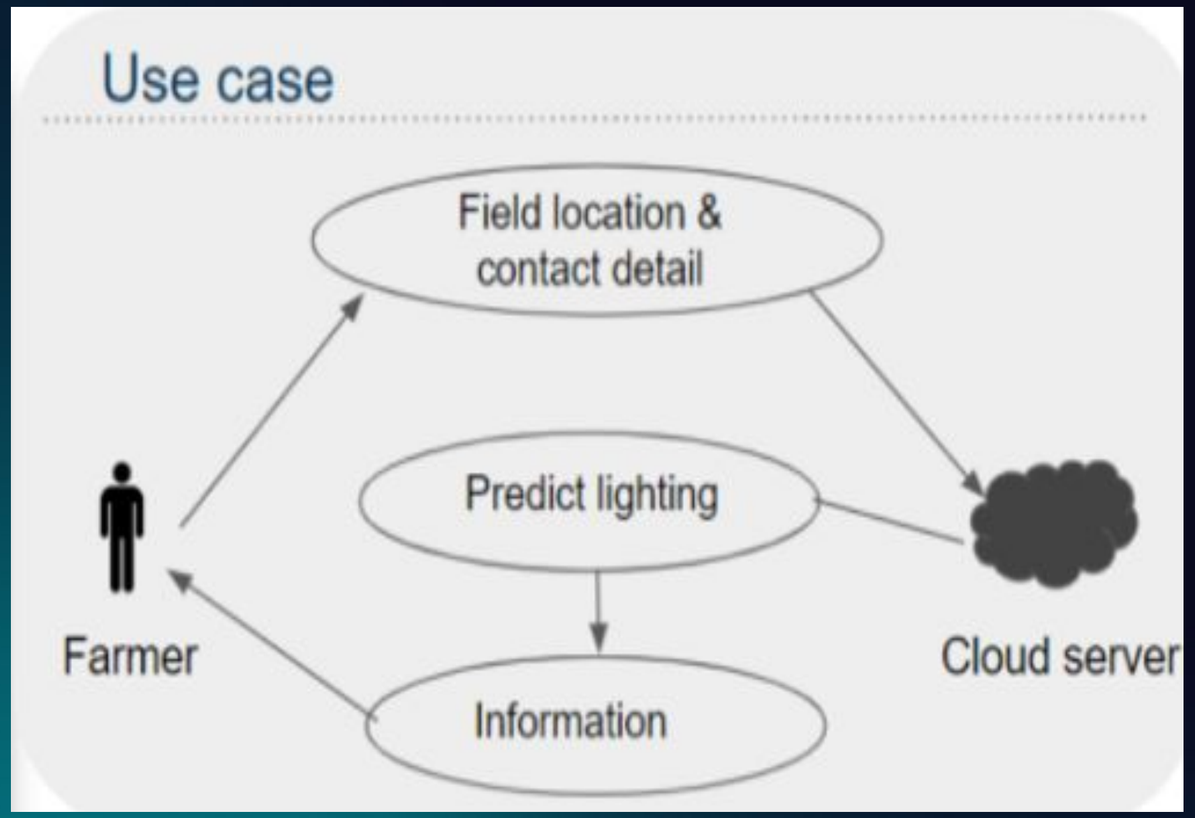
1. We use live doppler radar and satellite data published by Indian Meteorological Department and then combine it statistically with Air Quality Index data of that area and come up with a joint probability.

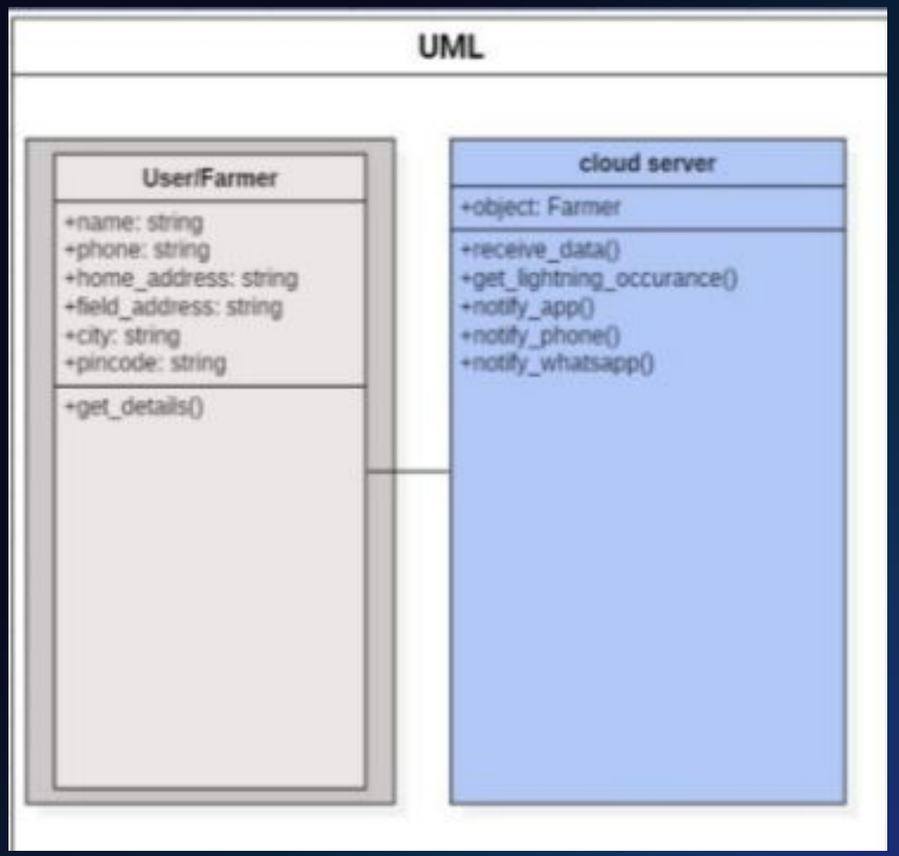


2. This joint probability is then compared with a threshold value. On the basis of this comparison we predict the occurrence of lightning.

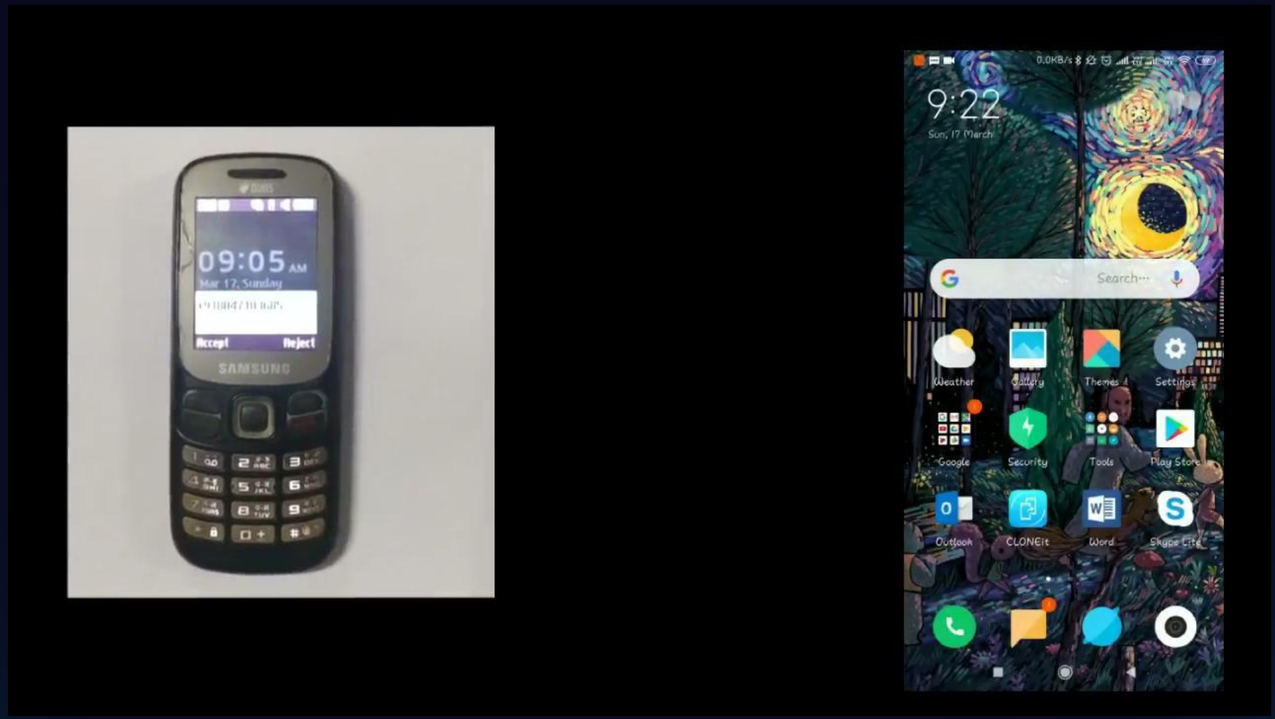
3. The threshold value is decided through applying Machine Learning technique. The solution improves the accuracy of lightning prediction compared to existing systems.

METHODOLOGY





WORKING PROTOTYPE



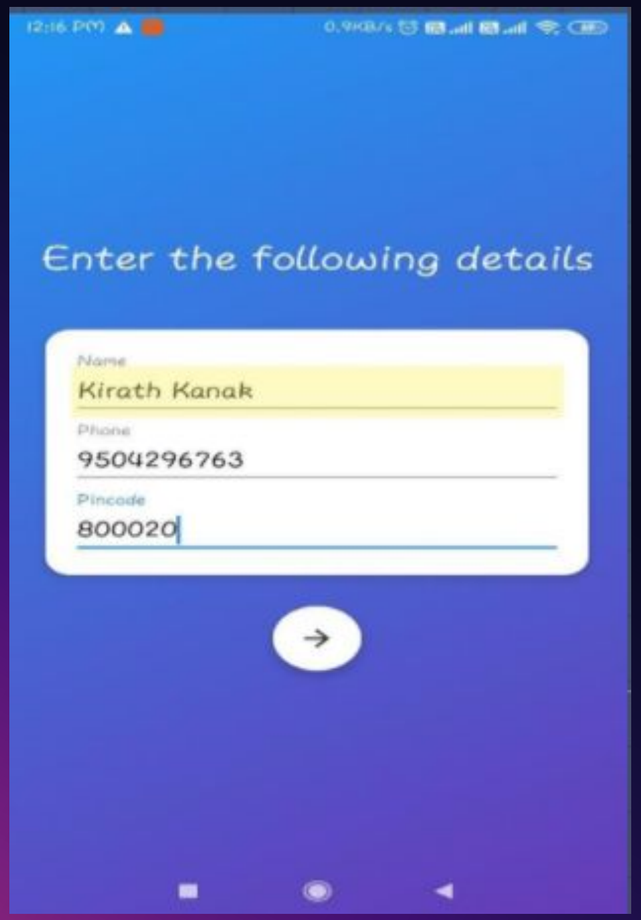
https://drive.google.com/drive/folders/1_yztwLdDDgCURO8WwpduQaQ_3DGETVgm (DEMO VIDEO)

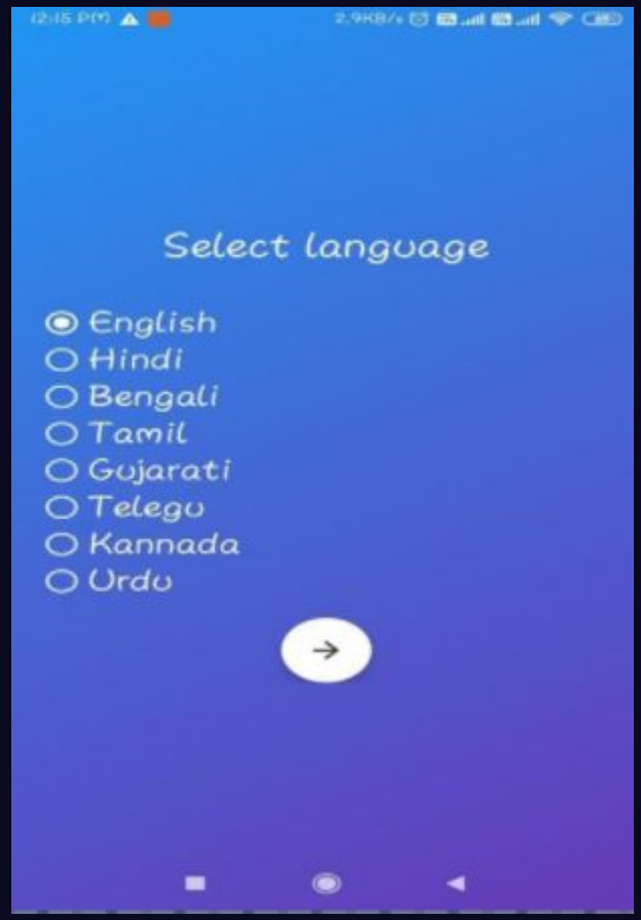
SOURCE CODE- https://github.com/ANKITSPANDEY/dexterous_squad

https://drive.google.com/file/d/13mCli8mstVy2JaoC7MkIMUsnDEzKmrxW/view?usp=sharing

ATTACHMENTS

FOR SMARTPHONE USERS





FOR NON SMARTPHONE USERS

E.g.4FGRX Rajiv 9504296763 8340001 HIN

- **4FGRX** is the code required to be affixed to message for using the free message service.
- **Rajiv** is the name of the user who wants to register.
- **9504296763** is the mobile no. of the user
- **HIN** is the type of language that user chose.

Financial Projections and Key Metrics

Briefly elaborate on what you want to discuss.

300,000
Topic 1

1,000,000
Topic 2

$850,000
Topic 3

Provide a three-year forecast containing dollars and key metrics such as the number of customers and conversion rate. Do a bottom-up, not top-down, analysis.
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Sitwell Games

- Topic 1
- Topic 2
- Topic 3
- Topic 4

Other Competitors

- Topic 1
- Topic 2
- Topic 3
- Topic 4

Provide a complete view of the competitive landscape. And saying that you‘re “more passionate” is utterly meaningless.
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