We will start the evaluations tomorrow from 12 noon in the Embedded Lab.

Each demo should be 10 minutes + 10 minutes Q&A

First, explain the problem and solution taking 1-2 minutes (if the evaluator doesn't understand what you are trying to do, they cannot evaluate)

Plan your demo well. Practice to make sure it works. You can even make a recording (in case Murphy's Laws come into effect and things stop working!)

If you want to have some write-up/presentation slides to help with the demo, that is quite okay.

Clearly identify and state any assumptions and constraints

It is helpful to think of any potential questions in advance and be prepared for them.

Practice and be ready!

Presentation needs:

Slide 1 : Problem to Solve and Solution (1-2 mins)

Problem :

While local weather forecasts can give you general predictions, a weather station in your backyard gives you real-time data that are often more accurate than the weather reports. Usually, the weather forecast focuses mainly on the cities, thus the actual weather information of a particular place could not be accurately read.

Solution :

This project is to build up a smart weather station. The weather station would require a power source suitable to provide the energy demand of the weather station. The humidity, temperature, rainfall like weather parameters is measured using sensors. The data from the sensors are collected and are displayed in real time. The data collected are preserved in the database for further processing of data to derive predictions on weather using machine learning algorithms .

Slide 2 : Overview of the Project

Image :

Slide 3 : Visualization of the Project

* **Run Arduino IDE** **:** Show reading of the data from the sensors using the serial monitor
* **Show Think Speak server :** Data gets uploaded to Thing Speak. Show Think Speak server (preferred more than NodeJS if charts from Thing Speak are obtainable to front end)
* **Open Local Host Database port 3306 :** Show the front end of the database

> Reliability - Real Time

Slide 4 : Constraints and Assumptions

-Accuracy

-Safety – LED LIGHT

-Removal of Rainwater - manual

Questions :

Why use flask?

The react library could be used to make the front end the react library could be integrated with flask so in this project we have used a plain HTML home dot HTML is the one that renders the interface but when we need to have multiple rages in the website we could use reactor which has a higher response time and which is easy to make changes as well so since react is react disabled to be integrated with flask we preferred flask over any other backend whereas node-js could be used as back end if react is used.

Why not use wind speed sensor?

In this model we need to determine the possibility of rainfall at that day so a binary decision needs to be formed so this we need to approach it as a classification problem collect we used two different data sets from tenet and we collected the data that we took multiple data sets from the Internet and we combined them use we combine them filtering the data so corresponding to our senses we have used in this system after a pre processing the data set we encoded and scaled the data set. Since the data set of obtained is very large we used random forest classifier to train the model and then we are using track then we obtain the efforts go and the accuracy score and the accuracy maximum accuracy is go value will change his .99 after fitting the model we can see the prediction in the web page