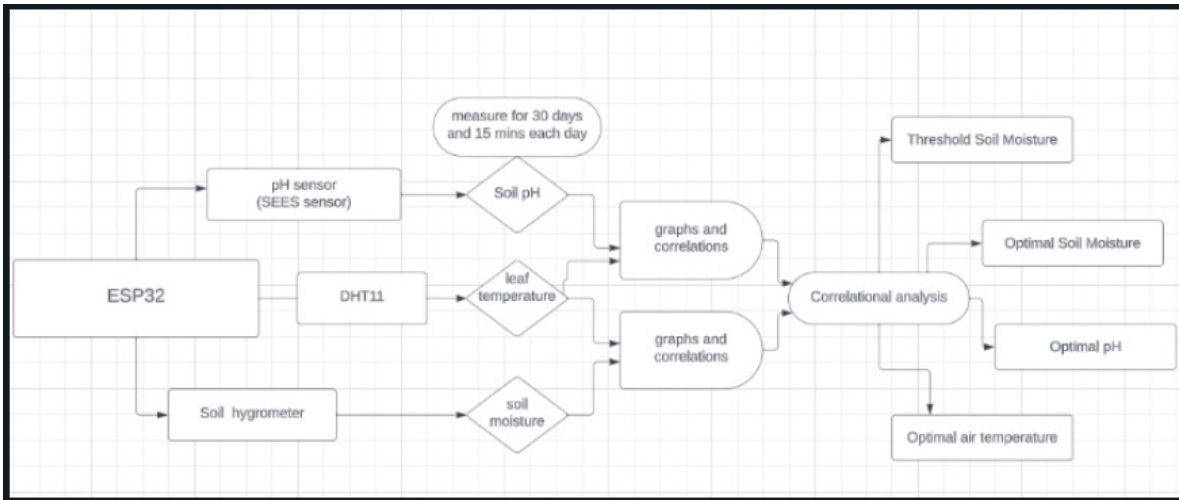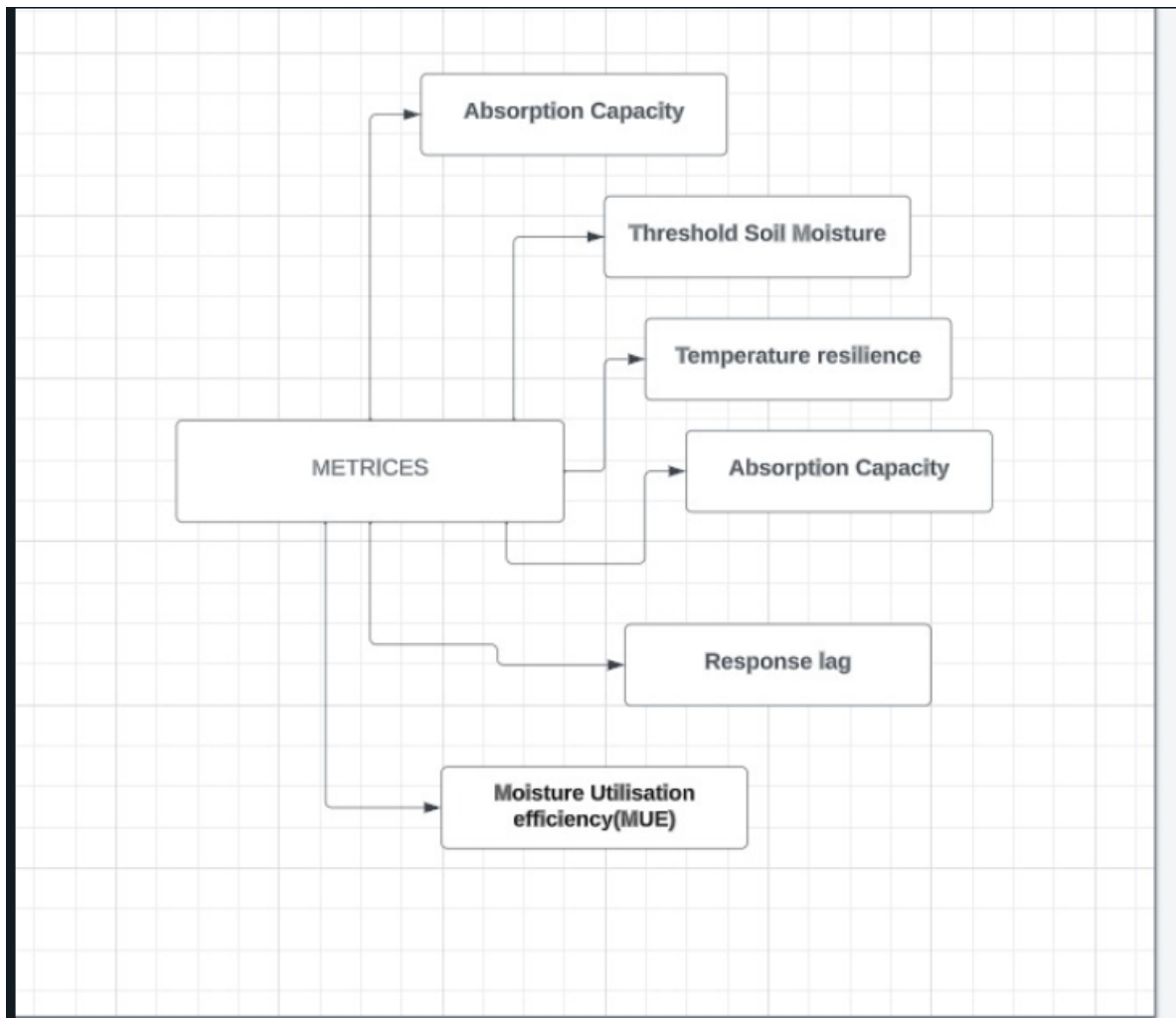# PLANT HEALTH MONITORING

TEAM 36

December 2, 2023

1 INTRODUCTION

Our project's main aim is to derive conclusions about a species of plants and suggest the optimum conditions for plant growth by establishing correlations between different factors. We conducted an analysis on various factors by observing the graphs plotted between the leaf temperature and ohttps://www.overleaf.com/project/656ae3891937f4853f90bffdther chosen parameters (pH and soil moisture).

2 FLOWCHART

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                  ┌──────────────────────┐
          ┌──────▶│ Absorption Capacity  │
          │       └──────────────────────┘
          │              ┌──────────────────────┐
          │       ┌─────▶│ Threshold Soil Moisture│
          │       │      └──────────────────────┘
          │       │            ┌──────────────────────┐
          │       │      ┌────▶│ Temperature resilience│
 ┌────────────────┐      │     └──────────────────────┘
 │                │──────┘     ┌──────────────────────┐
 │    METRICES    │───────────▶│ Absorption Capacity  │
 │                │            └──────────────────────┘
 └────────────────┘
          │          ┌──────────────────────┐
          │─────────▶│     Response lag      │
          │          └──────────────────────┘
          │    ┌────────────────────────────┐
          └───▶│   Moisture Utilisation      │
               │     efficiency(MUE)         │
               └────────────────────────────┘
```
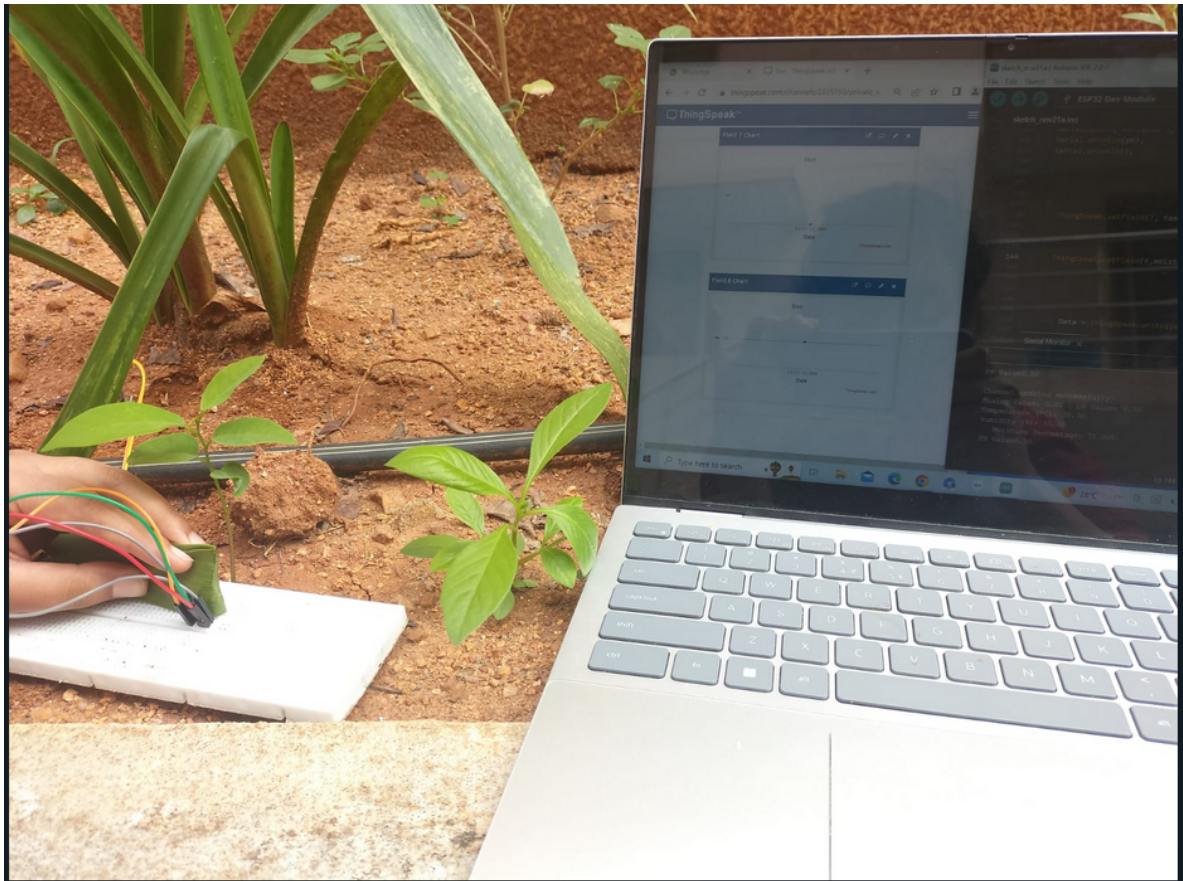
These flowcharts represent the idea of our project , the way we proceeded and metrices drawn from the data analysis.

Detailed Analysis on the below metrices for each plant is explained in the website.

Pictures during our data analysis

3   References

Link to pH Sensor Calibration and Code Reference:
https://how2electronics.com/diy-iot-water-ph-meter-using-ph-sensor-esp32/

Link to Soil Moisture Code:
https://www.electronicwings.com/esp32/soil-moisture-sensor-interfacing-with-esp32

NOTE: All the files related to the website and Arduino codes are submitted in the zip file. For graphs and day-wise data analysis, refer to the website.