



Sensor Ecosystem for Controlling Agriculture - SECA

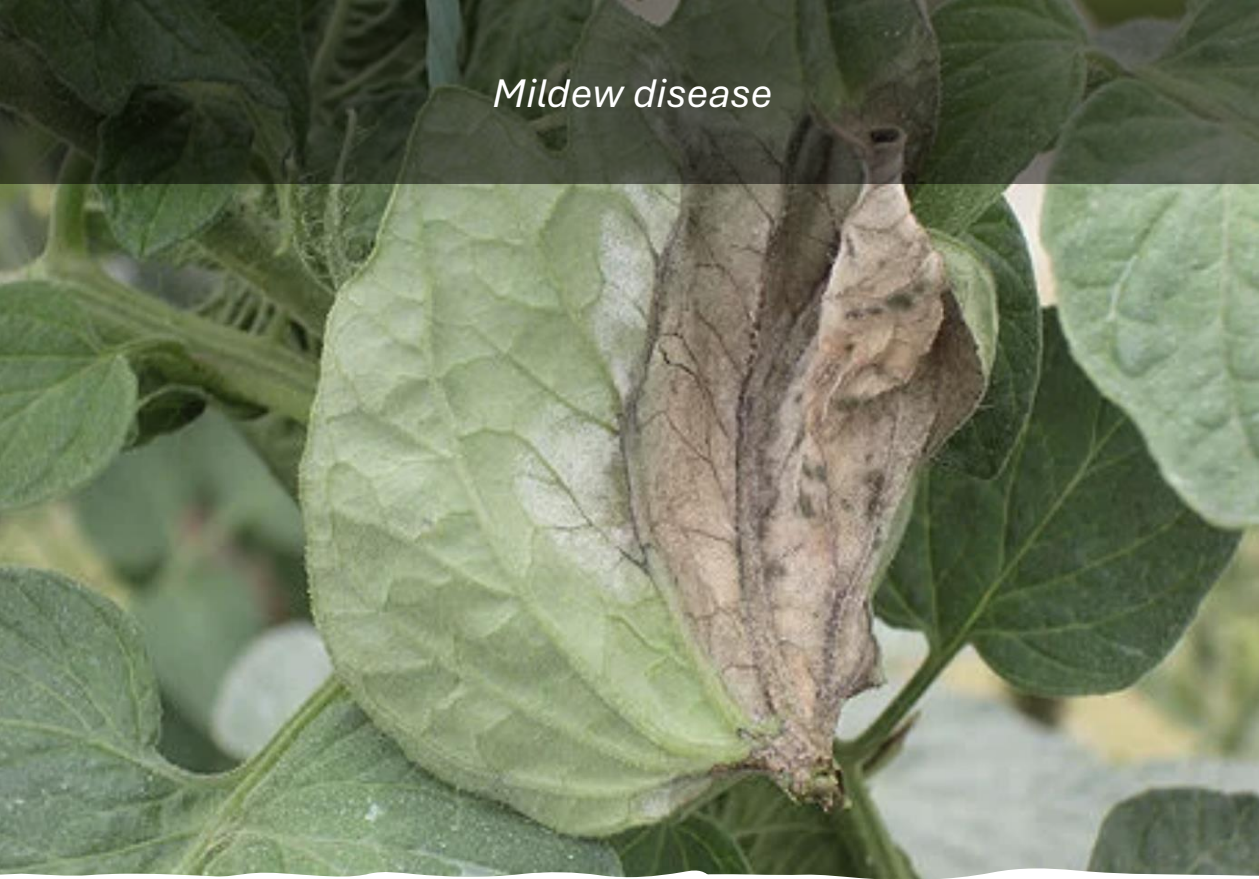
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Challenge ID: 16

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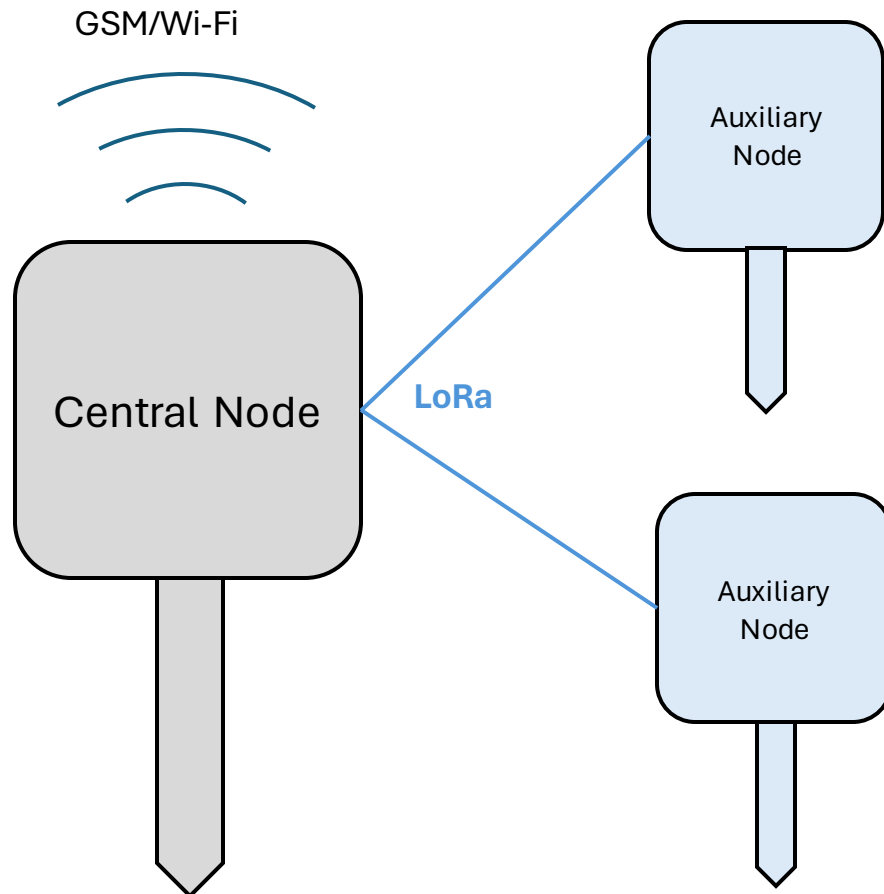
Mildew disease



Alternaria disease



Meetings



Network

BLE	LoRa
< 100 m	> 10 km
No additional hardware	Additional LoRa transceiver

GSM: Dependente do material

Energy Management

Auxiliary Nodes:

- Initial decision: Solar Panels (dropped)
- Current decision: regular batteries

Central Node:

- Initial decision: Solar Panels
- Current decision: Solar Panels vs. direct connection to the grid





Computer Vision

Two portions:

- Finding a framework that does **something**
 - <https://github.com/tensorflow/examples>
- Change that framework to fit our specifications
 - <https://github.com/cpaolini/tomatoleaf>



WebApp - Backend

- Full time server to Host Databases and Web Application.
- Created Databases to Allow multiple users with multiple Nodes to have their Data stored.
- Build API to support front-end services.

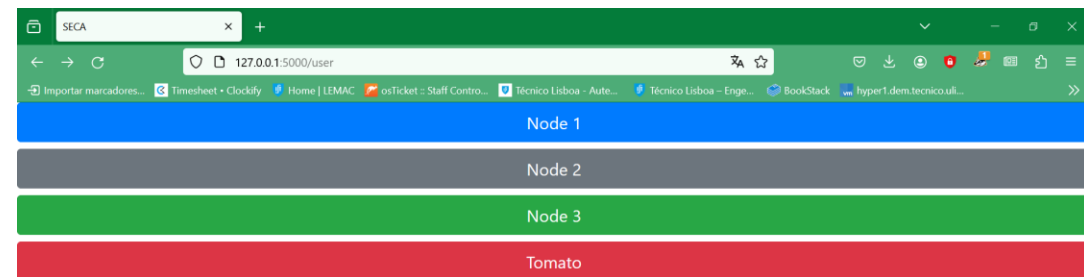
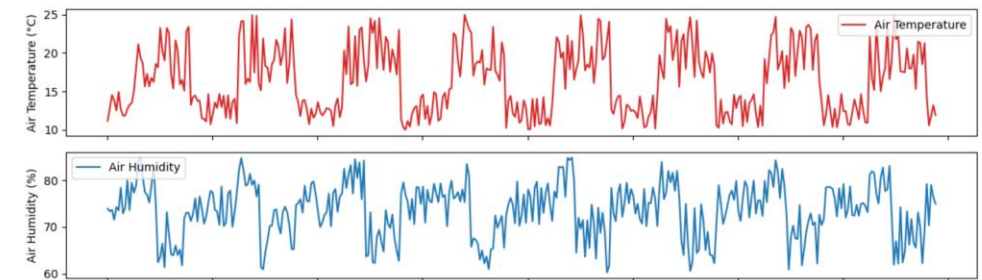
WebApp – Frontend

- Webapp developed in Flask + Bootstrap
- Login page completed
- Page with node information dispalyed:
 - Battery voltage
 - Luminosity
 - Soil humidity
 - Air humidity
 - Air temperature



Last vbat value:3.43

Graph Display



Website

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DEPLOY REAL-TIME MONITORING FOR TRACKING PROGRESS

Processes the data obtained from sensors to enable continual oversight of the that operations can be efficiently managed from a distance. This method not e tracking of various parameters but also empowers farmers to make timely ents to optimize crop health and productivity.



Corrected Schedule

