VirtualWatering

Os Corolla

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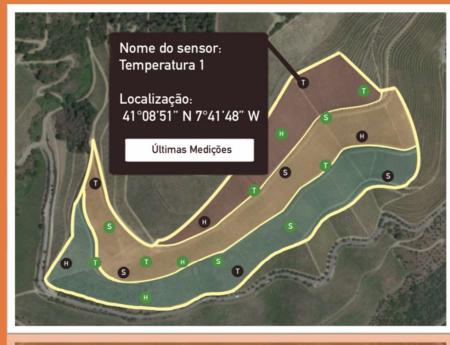
D1   DC, 4/16/2023

Droughts are becoming a problem in Portugal.

Farmers need data to manage their land and optimize crop growth and water consumption.

Our solution

To measure temperature, soil moisture and humidity at any point in the farmland without the exclusive need of physical sensors.

A web interface where virtual sensors can be placed in any point to measure this properties in real-time.

Nome do sensor:
Temperatura 1

Localização:
41°08'51" N 7°41'48" W

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The Magic Behind

So what's the trick?

Physics informed neural-networks.

Trained neural-networks with simulations based on physical models and data measurements.

These trained models are the virtual sensors.

Physical Sensors

Physical Models

Simulations

Neural Network

Virtual Sensors

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Why Our Solution?

- To manage crop position

- To optimize water resources

- To reduce the amount of physical sensors on-site

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Business model

- Electrical setup of the physical sensors;
- Improved Neural Networks;
- Improved Simulation Models;
- Continuous support to the client.

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