**Sécurité alimentaire**

**Année de création**

**Smart Irrigation System for Greenhouses**

**Description:**

**"Smart irrigation System for greenhouses"** is a smart system that predicts the daily water amount the plant needs it. The developed system can predict the water amount from the daily plant environment changes that vary from plant air conditions **(Air Temperature, humidity, Pipe temperature, CO2 emission…)** to soil variables **(soil EC/ PH).**

The developed system has been designed based on a Deep Learning model, which is the Multi-Layer Perceptron **(MLP).** This model predicts the daily water amount with an error margin of **0.04 l/m2**.

**Objective, and Utilities:**

Because water has become a critical resource that needs

to be managed precisely, and because the irrigation process is considered one of the main problems for the farmer. The main objective of this system is to help the farmer to decide the appropriate water amount the plant needs to irrigate it.

**System Usage:**

The developed system can be used in any controlled greenhouse where the different sets of sensors **(environmental sensors and soil sensors)** are installed inside it, which represent the necessary inputs of our system.

**Contact**

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