

# **Fogget-about-it grow management system**

Preparing the groundwork for the next agricultural revolution.

## **Problem definition:**

- Over the last few years, there has been research into the cultivation technique known as “fogponics”, a high-intensity form of agriculture which benefits more from automation than any other.
- This project provides a management and control system for a fleet of fogponics units that can be extended to other use-cases.
- This is in continuation of a project I have been running off and for half a year. The physical prototype is (mostly) built but lacks a control panel.

We got ourselves a control panel.

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## **Functional requirements:**

- We're building a basic control system for an IoT use-case.
- The control system gathers and updates the current state information of the embedded systems growing plants.
- It must also be able to maintain a list of recent events for perusal by the end-user.
- New systems are to be automatically given sane defaults and added to the system pool. The only user responsibility must be sourcing the embedded system with a unique 64-bit integer ID.
- The end-user must be able to change settings.
- These settings must be validated in order to correct against nonsense inputs.
- "Computer, set the rooting chamber to -273 degrees C..."
- The embedded system running the grow environments should do their own validation as good engineering, but layers of safety protect against screwups downstream.
- In effect, it acts as an application firewall.
- That's basically it as far as *functional* requirements go.