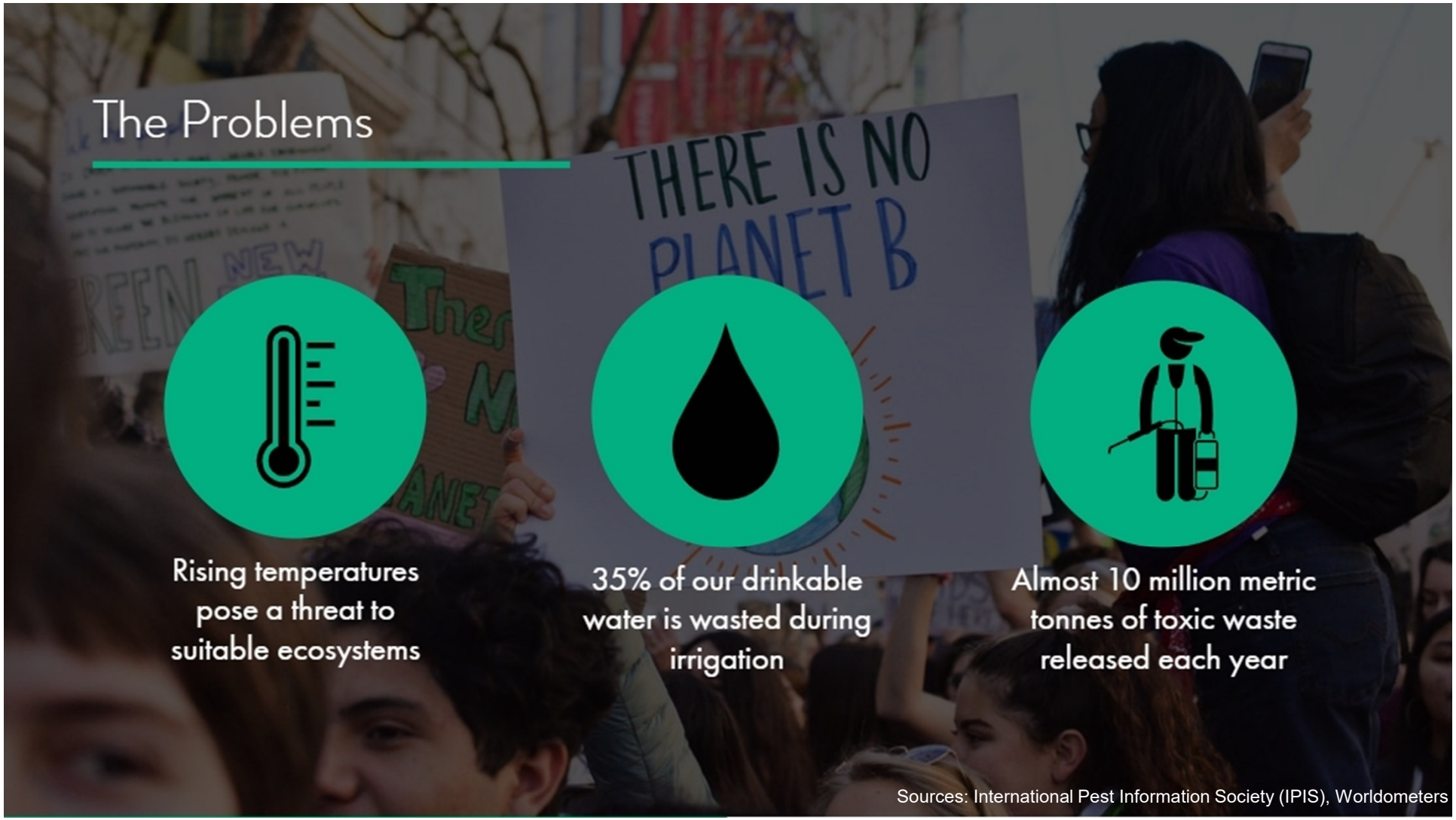

The Problems
THERE IS NO
PLANET B
Rising temperatures pose a threat to suitable ecosystems
35% of our drinkable water is wasted during irrigation
Almost 10 million metric tonnes of toxic waste released each year
Sources: International Pest Information Society (IPIS), Worldometers

Autonomous Plants

Chair of Data Processing

The Solutions

Monitoring vital plant data, autonomously and sustainably driving water levels

Optimal Location Search using a Photoresistor and randomized movement

DeepLearning Classifier capable of diagnosing diseases among three crops with 89% test accuracy

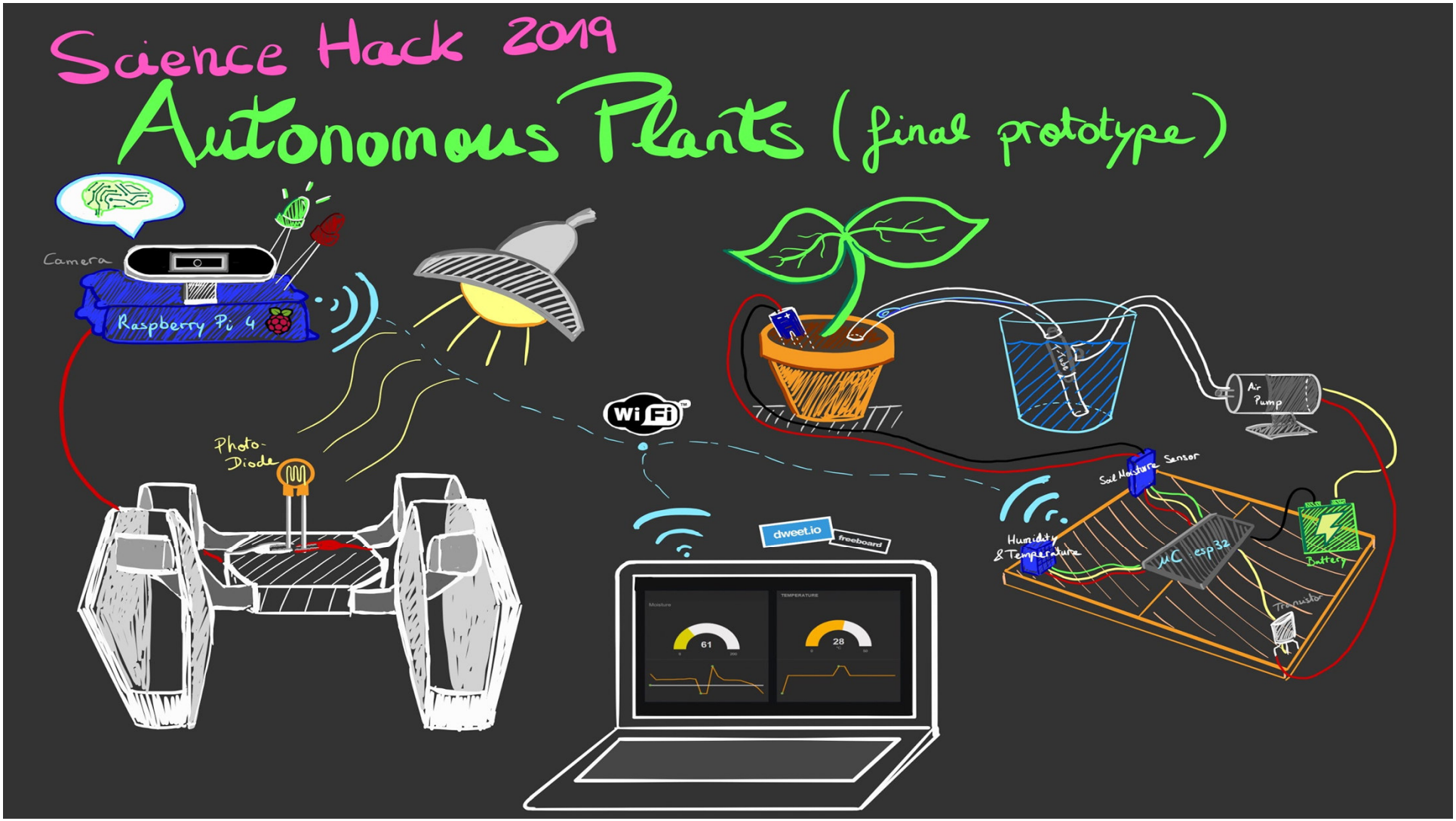
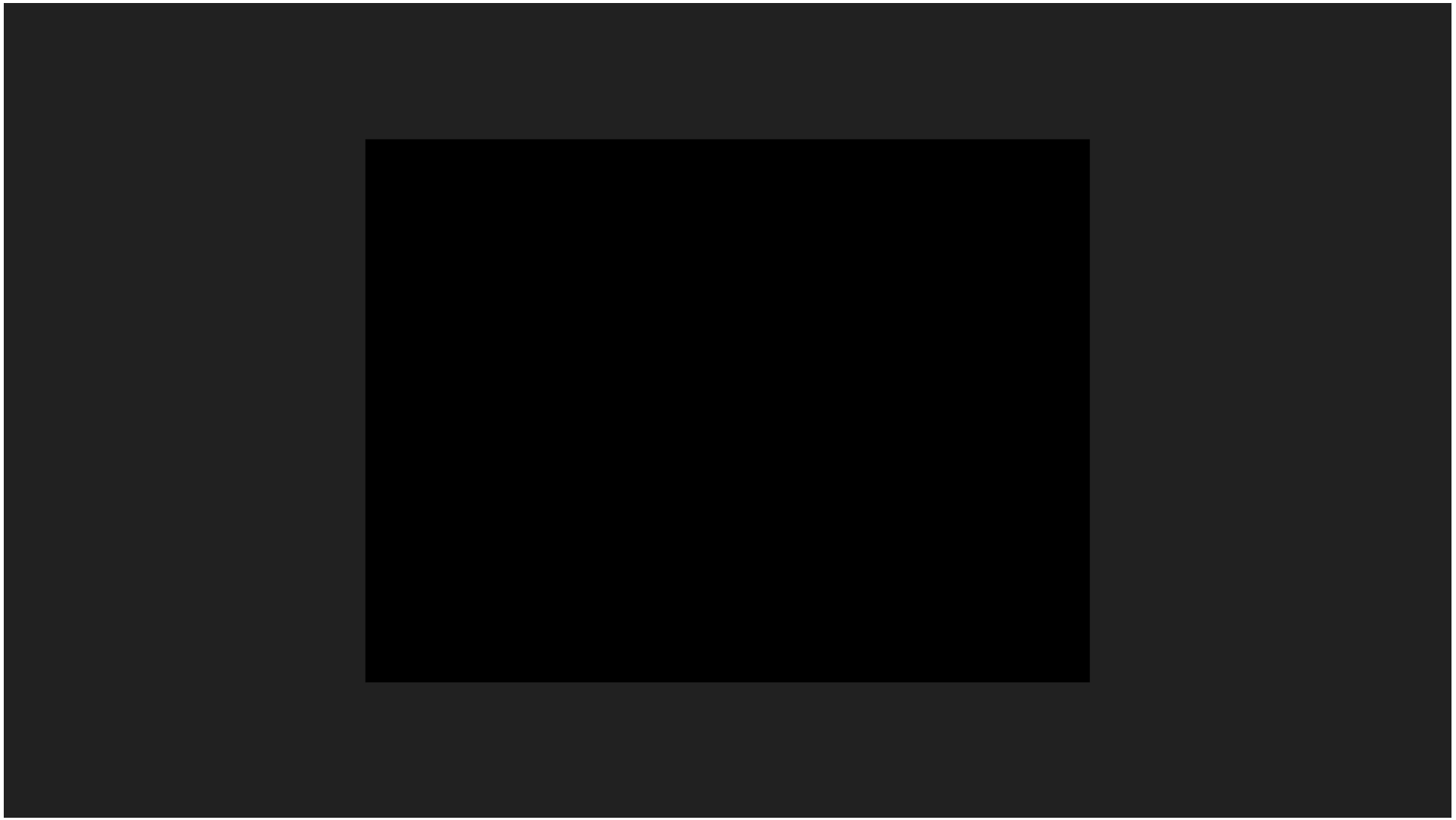
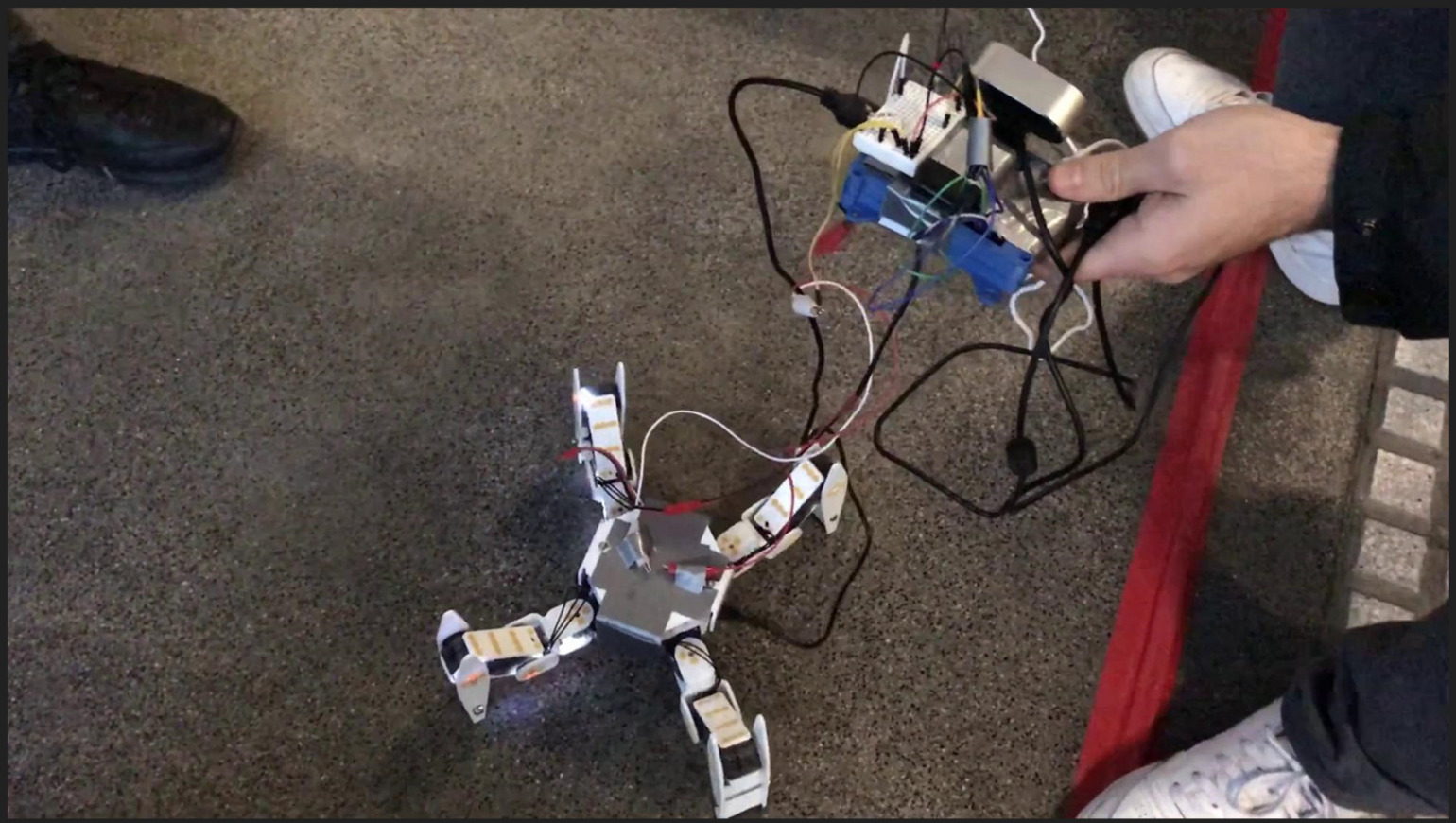
Dataset source: https://www.kaggle.com/emmarex/plantdisease#009dd1f5-281a-4e54-9f80-a068d0d8cfcd___YLCV_NREC%202162.JPG

Examples from the dataset

Potato, Early blight

Potato, healthy

Potato, late blight


Science Hack 2019
Autonomous Plants (final prototype)
Camera
Raspberry Pi 4
Photo-Diode
WiFi
dweet.io
freeboard
Moisture
61
TEMPERATURE
28
Tube
Air Pump
Soil Moisture Sensor
Humidity & Temperature
uC esp32
Battery
Transistor

Demonstration