


**(P.L.A.N.T.)**

**Plant  
Liquefying  
Automation  
Notification  
Tool**

**WILL BERNATH, TANNER MORREALE, SILVIO AZZAM,  
BOBBY LUKASIEWICZ**

# Agenda

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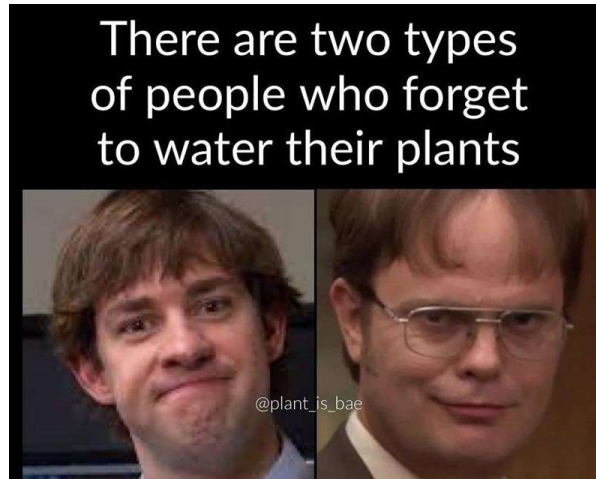
- Introduction/Background
  - Problem Overview
  - Solution
  - Features
  - Technology
  - Engineering Content
- 

# Introduction

Have you ever forgotten to water your plants and they end up dead? Well do we have a device for you...



My unwatered houseplants watching it rain outside:



I literally did not know that existed, until this moment

Well, I knew it existed, and I chose to let it die



# Problem Overview

## *Problems with Plant Owners*

- Little knowledge of plant needs
  - Sunlight needs
  - Water needs
  - Environment temperature needs
- Forget to take care of plants

## *Problems with Plants*

- Each plant requires different living conditions
- Plants can be unpredictable and dry up
- Difficult to tell how much water and sunlight a plant needs

# Solution

## *Device*

- Automatic plant watering device with a plant data-base
- Battery powered
- Wifi-Enabled user interface
- Equipped with a Sunlight sensor
- Equipped with a Temperature sensor
- Equipped with an water pump and reservoir level sensor

## *Purpose*

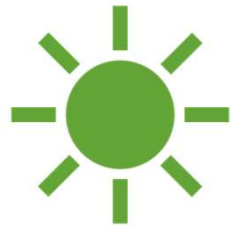
- Depending on the plant type
  - Soil moisture measurements to make sure it is in range, and automatically dispenses water until back in range
- The Sunlight and Temperature sensor measure if the environment is inadequate
  - User is prompted to move pot
- Water reservoir level low
  - User is prompted for a refill

# Key Features

## *Sensors*



*Water Level*



*Sunlight*



*Temperature*



*Moisture*

## *Capabilities*



*Phone Connectivity*

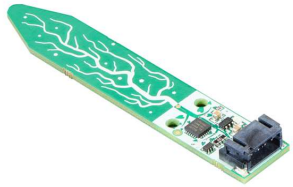


*Plant Database*

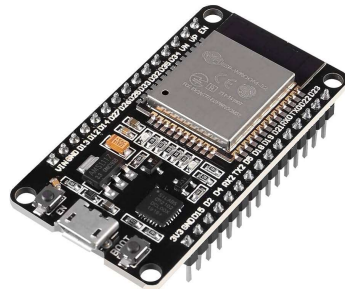


*Water Reservoir*

# Technology



Soil Moisture Sensor  
(Adafruit 4026)



ESP32-WROOM



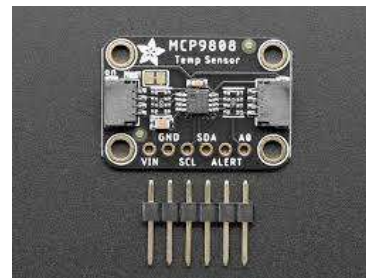
Sunlight Sensor  
(LTR-329)



LiPo Battery



Water Pump (Adafruit  
4547)

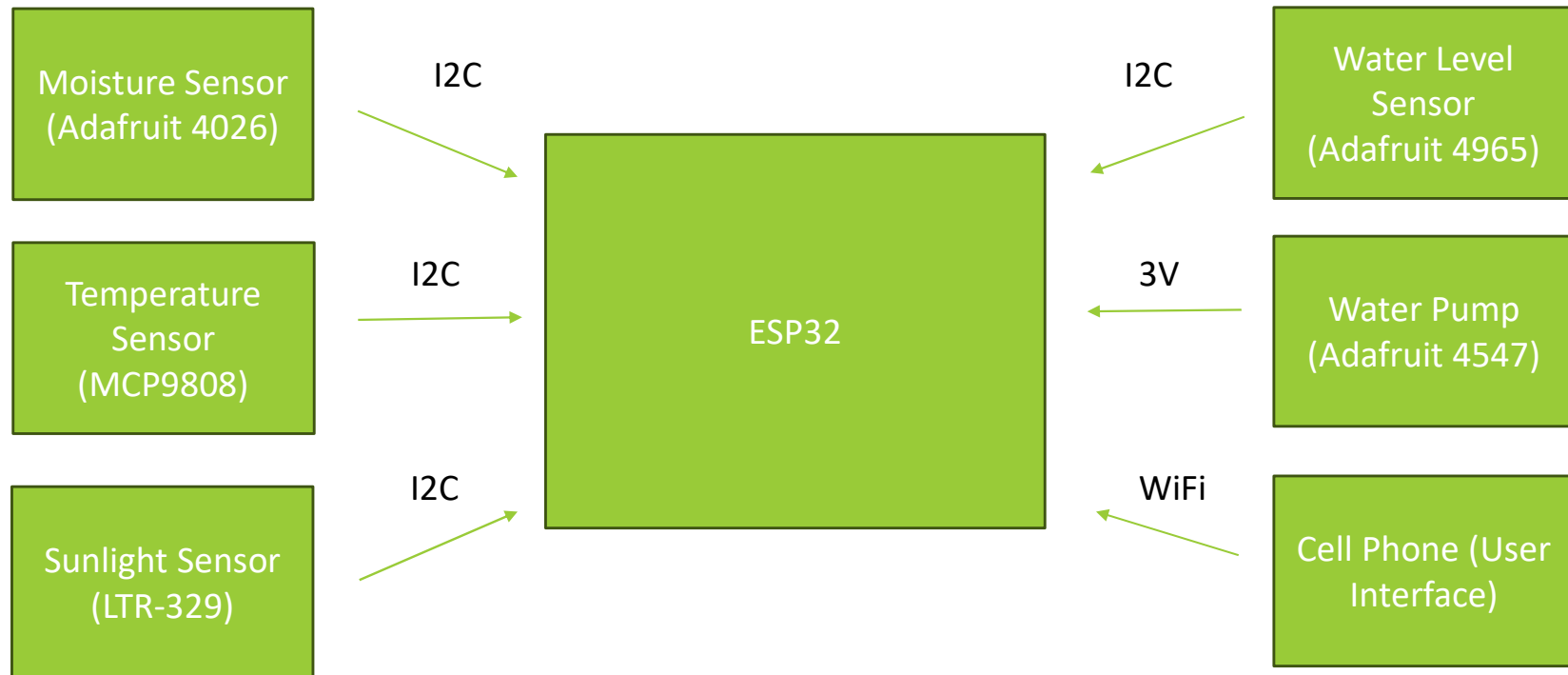


Temperature Sensor  
(MCP9808)



Water Level Sensor  
(Adafruit 4965)

# Engineering Content:



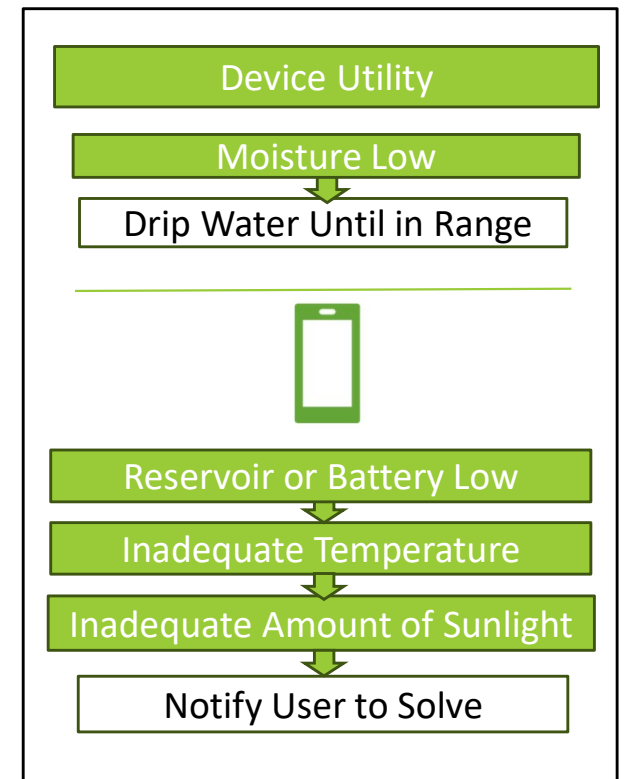
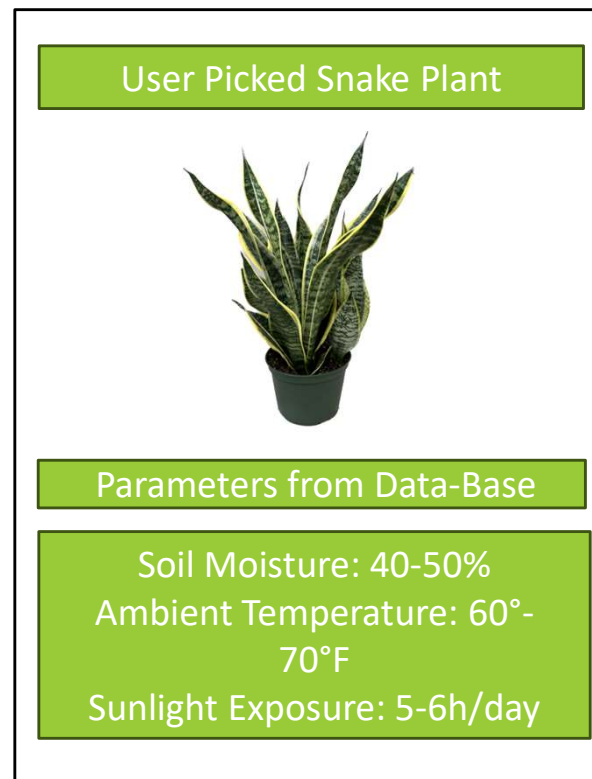
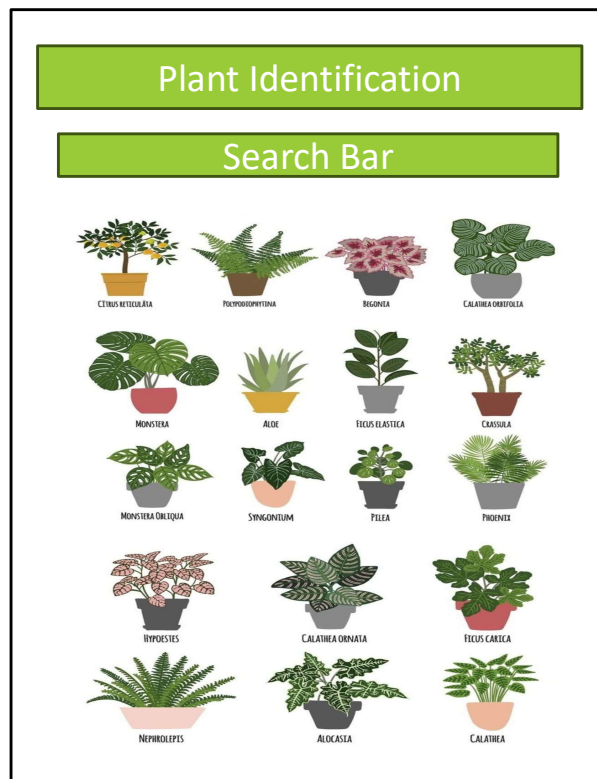


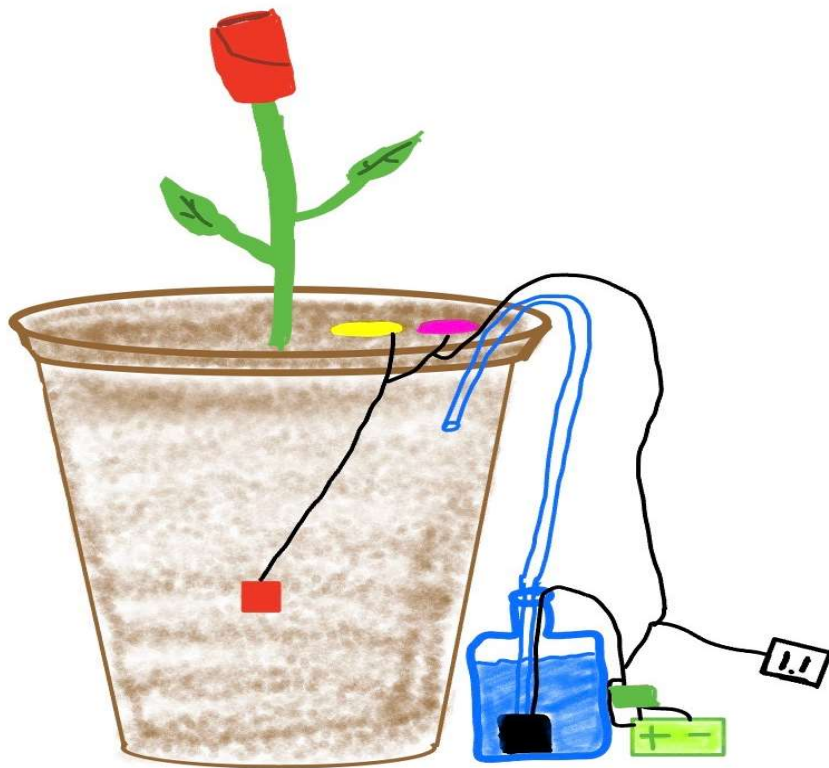
## Slide 8









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**GUO** add a box that says phone or desktop to have our wifi connection to the user  
Guest User, 2023-11-28T04:36:24.897

# Engineering Content: User Interface





-  • Battery
-  • Charging Port
-  • Water Pump and Level sensor
-  • Temperature Sensor
-  • Sunlight Sensor
-  • Soil Moisture Sensor
-  • Main Board
-  • Water Reservoir

**Questions?**