

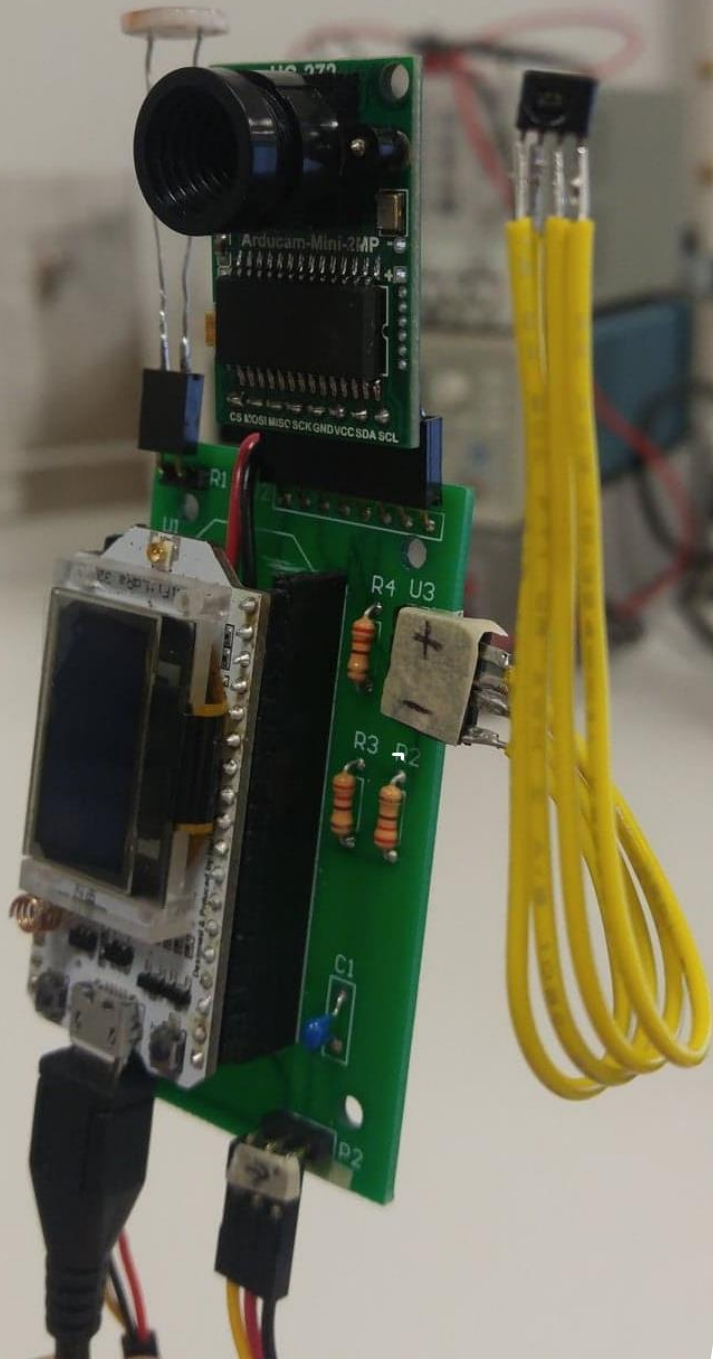
# Fresh View



AUTOMATED  
PLANT  
MONITORING  
SYSTEM

# The Project

*Fresh View is a cloud-based plant monitoring system that provides numerical and visual data of plant growth to identify and automate the ideal growing conditions.*







# The Problem

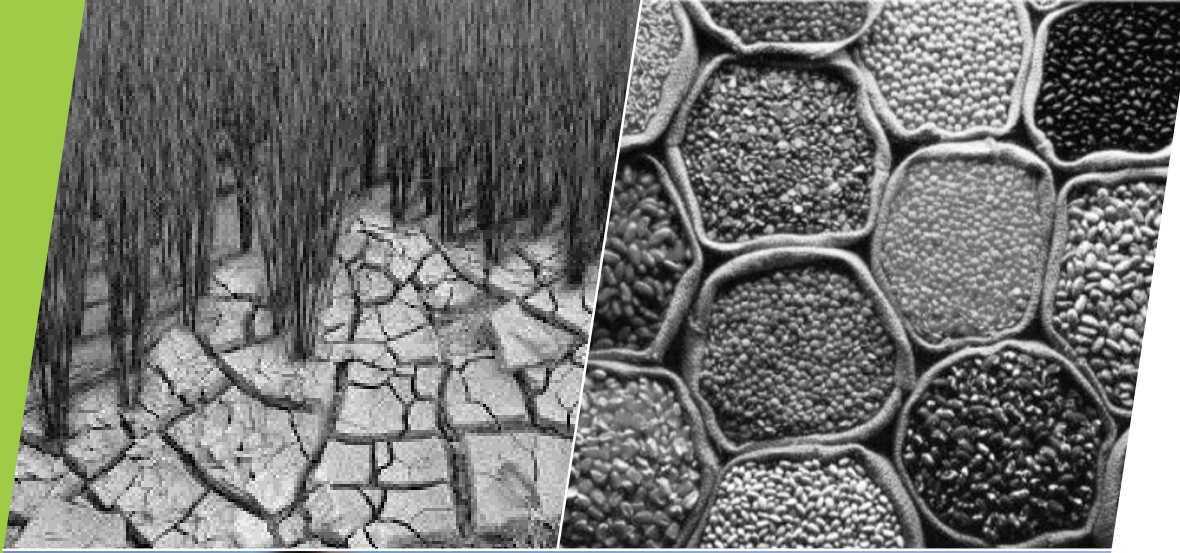


# The Problem



# The Problem





# The Problem

# The Fresh View Solution



Wireless monitoring



Plant history



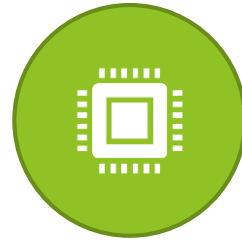
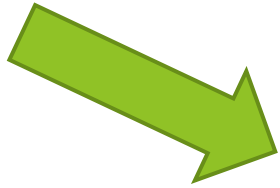
Automatic control



CAMERA



SENSORS



MICROCONTROLLER



FIREBASE



PHONE APP

# How does it work?

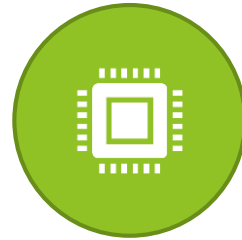
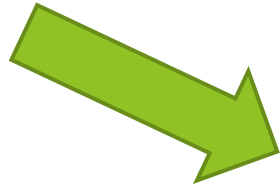




CAMERA



SENSORS



MICROCONTROLLER



FIREBASE



PHONE APP

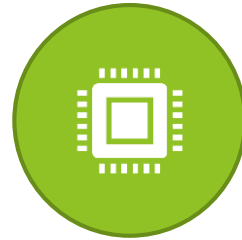
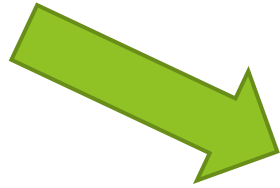
# How does it work?



CAMERA



SENSORS



MICROCONTROLLER



FIREBASE



PHONE APP

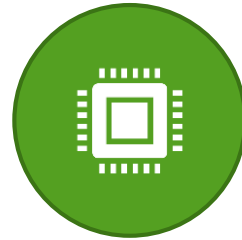
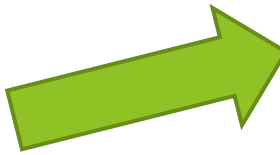
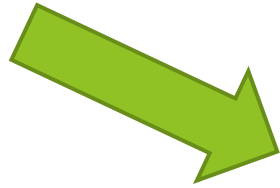
# How does it work?



CAMERA



SENSORS



MICROCONTROLLER



FIREBASE



PHONE APP

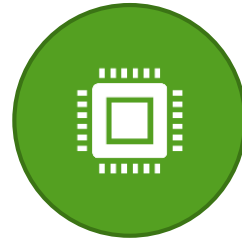
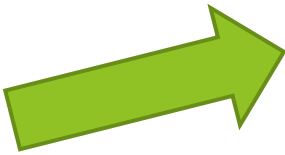
# How does it work?



CAMERA



SENSORS



MICROCONTROLLER



FIREBASE



PHONE APP

# How does it work?

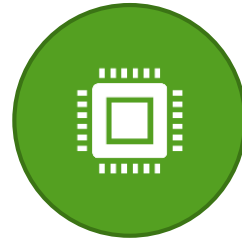
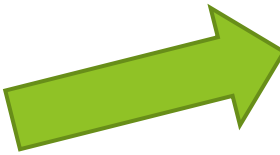
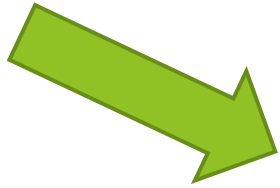




CAMERA



SENSORS



MICROCONTROLLER

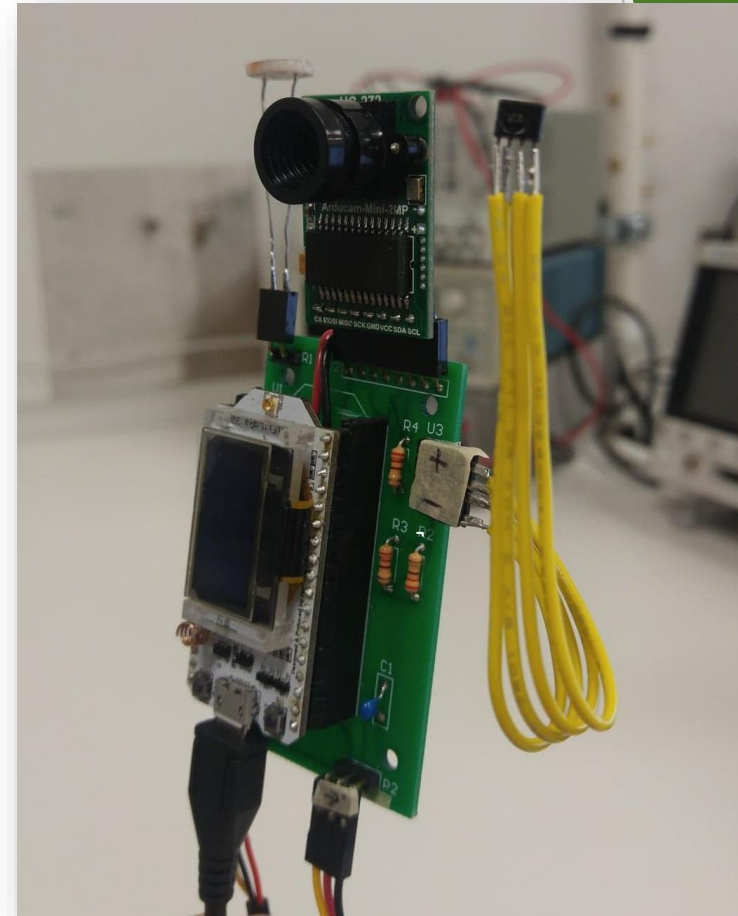
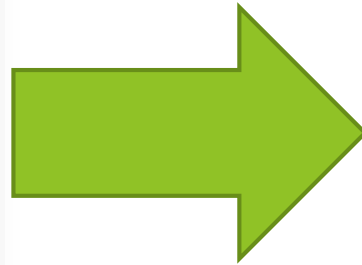
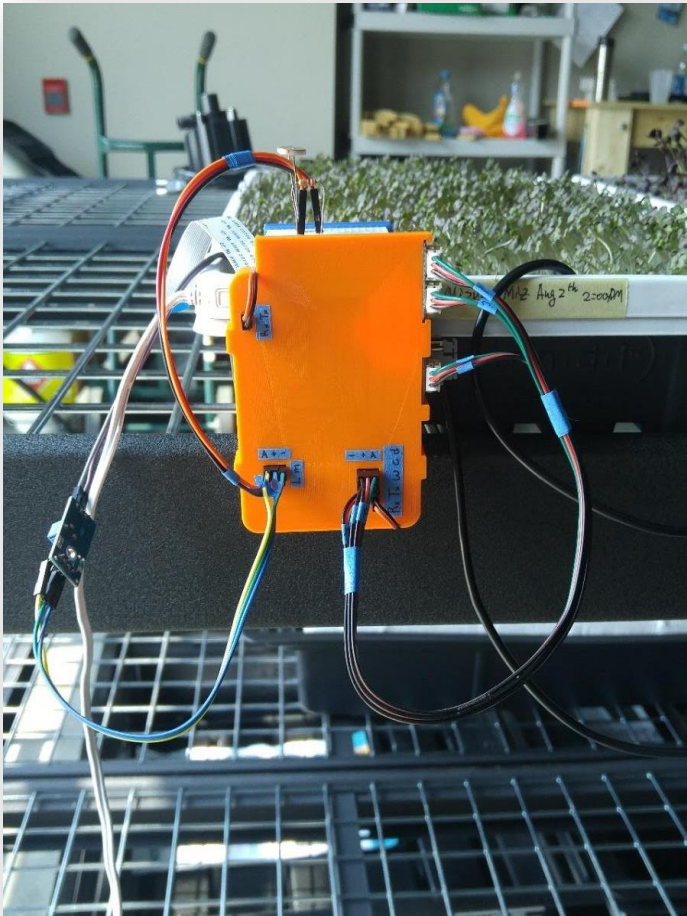


FIREBASE



PHONE APP

How does it work?



# The Process

# Hardware

Arducam 2MP Mini  
Camera

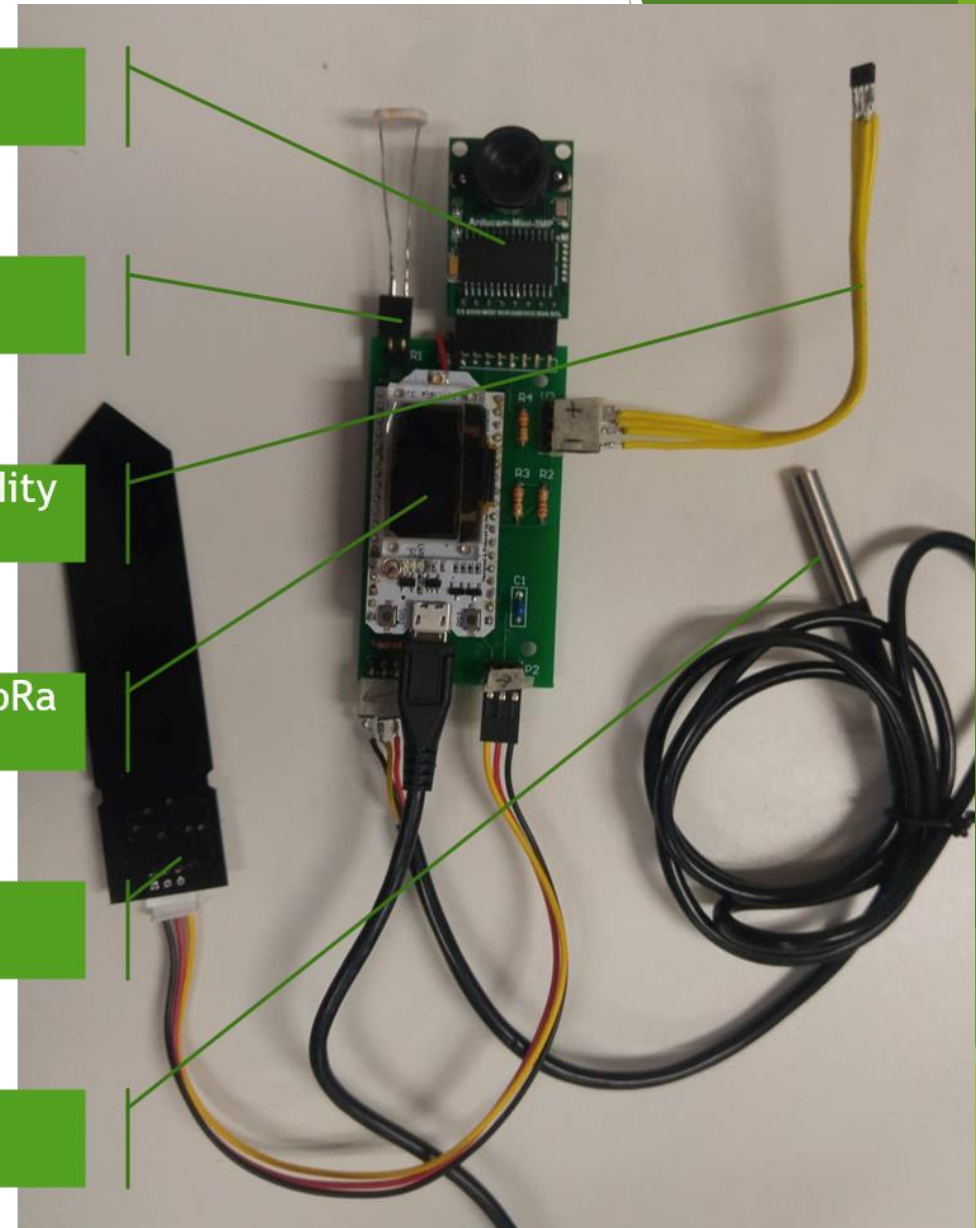
Photoresistor Light  
Intensity Sensor

HH7120 Temp/Humidity  
sensor

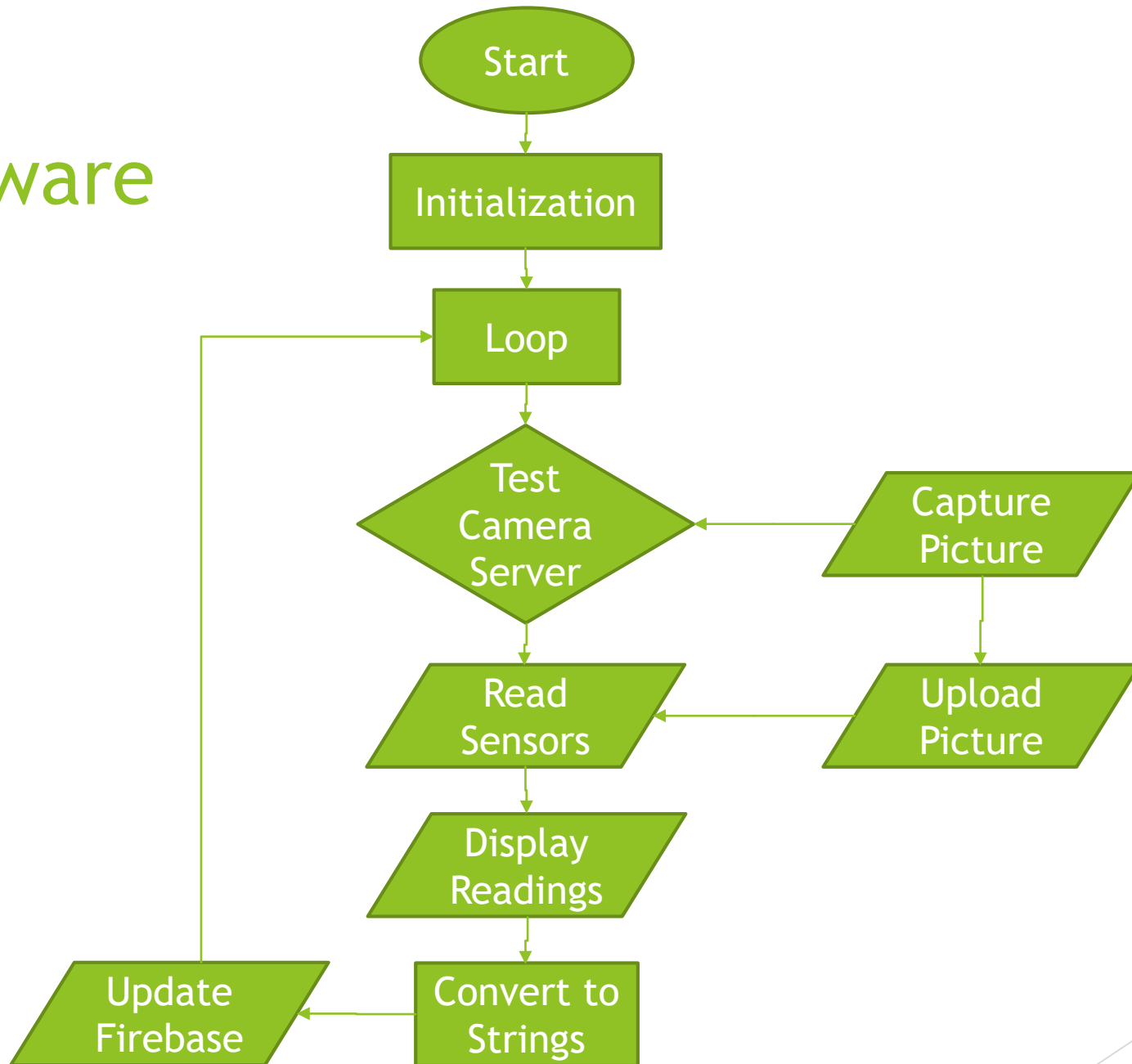
Heltec ESP32 Wi-Fi LoRa  
Microcontroller

Capacitive Moisture  
Sensor

DS18B20 Water  
Temperature Sensor



# Software





# Software: Firebase to App





# Firebase

Firebase:

- ▶ A form of google cloud
- ▶ Real time database

urban-fresh-sleep-mode-d8524

"DATE: ": "2018-10-22"

- FirebaseIoT

LightIntensity: "7.00"

Moisture: "-300.00"

Temperature: "25.31"

"HOUR: ": "13:31:05"

- Logs

+ "DATE: "

+ "HOUR: "

+ LightIntensity

+ Moisture

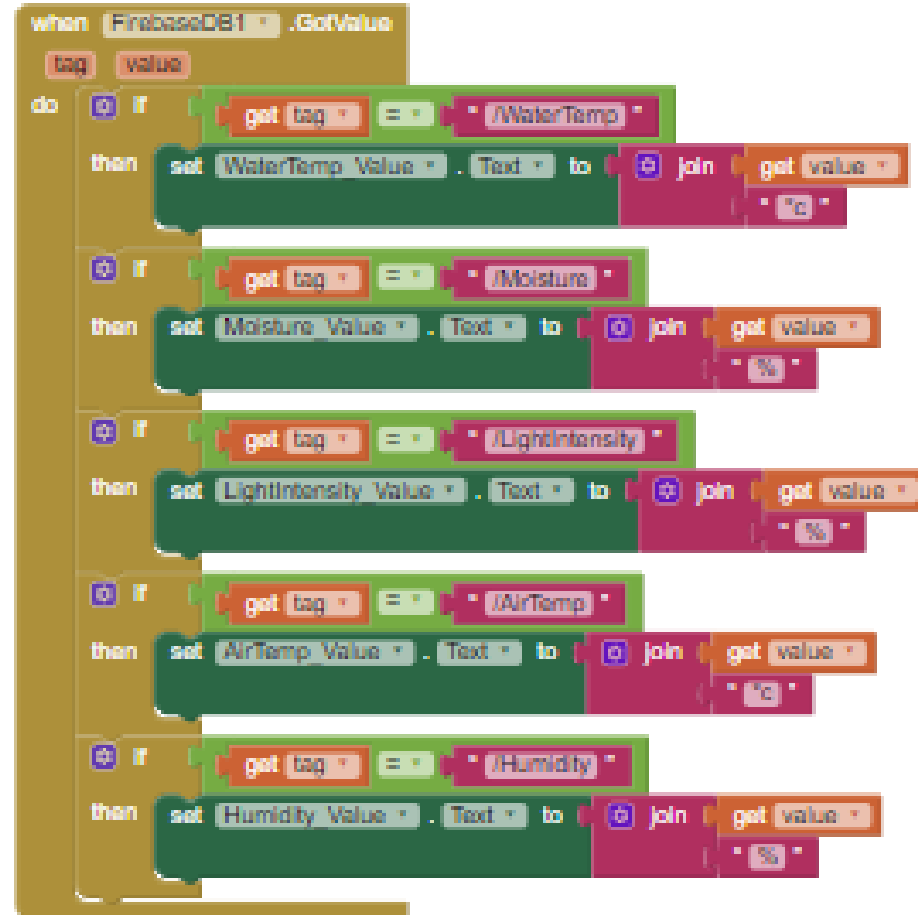
+ Temperature



# MIT App Inventor

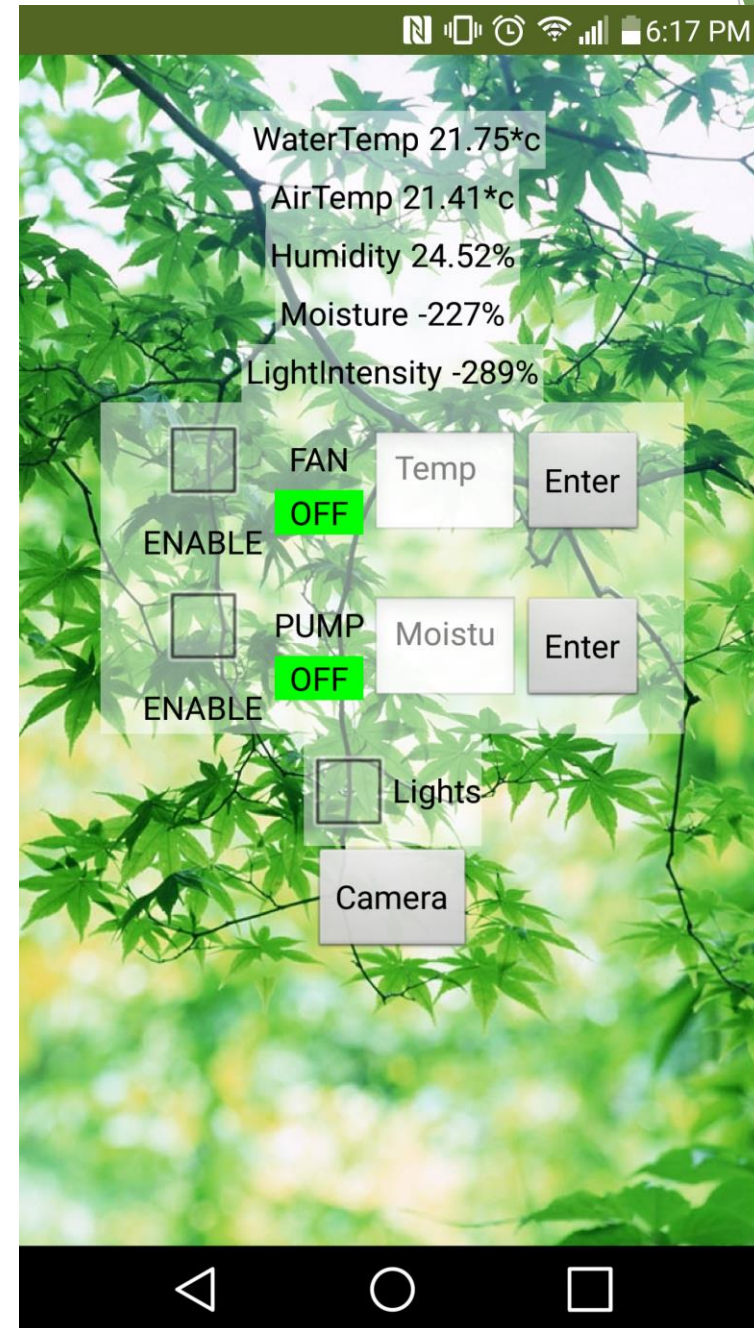
## MIT App Inventor

- ▶ User friendly app development
- ▶ Built in firebase connection



# App Interface

- ▶ User Friendly
- ▶ Regular information updates
- ▶ Pump, lights, and fan control
- ▶ Download as .apk for easy use



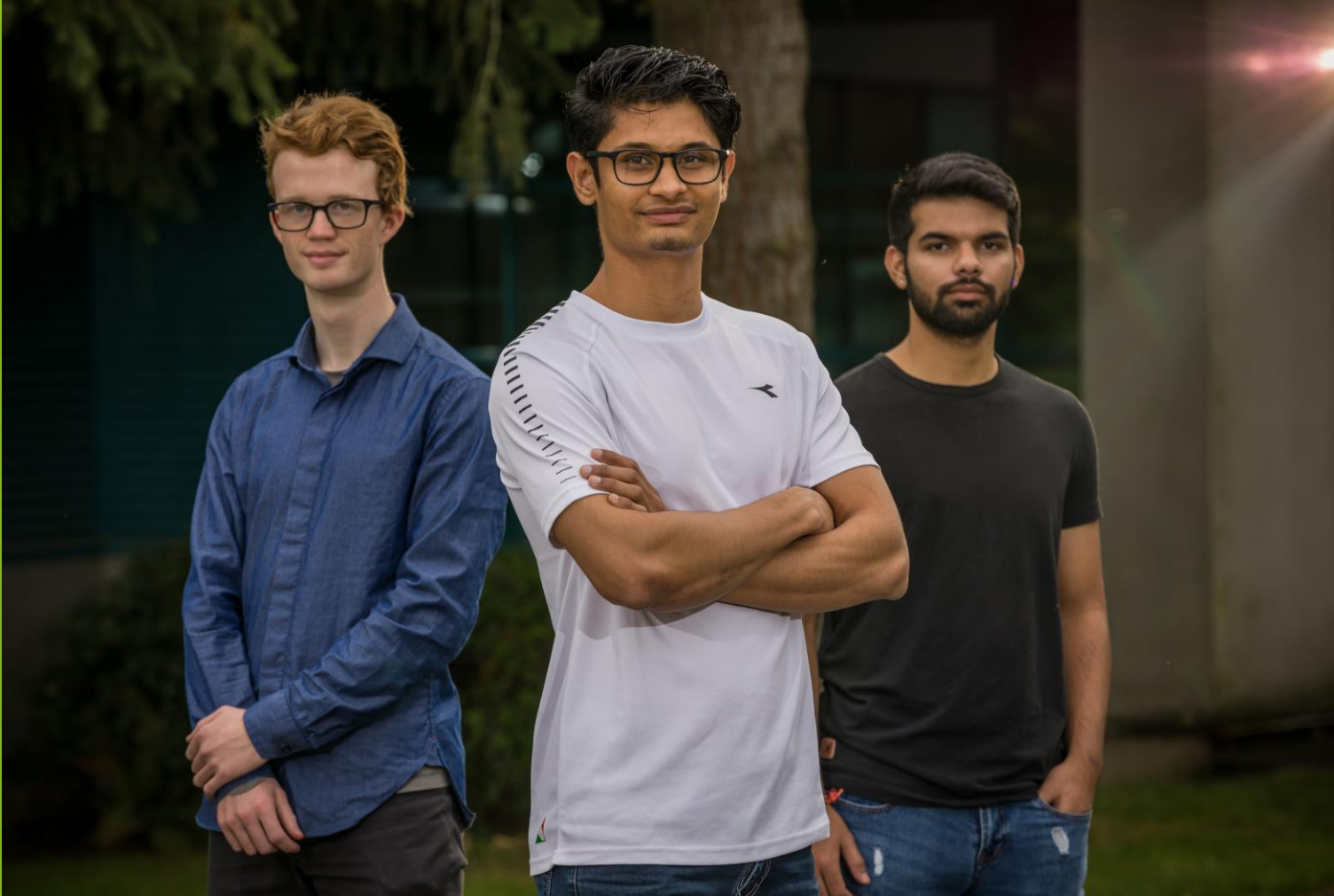




# ► Conclusion

A project with potential

# Thanks for Listening



## Fresh View



AUTOMATED  
PLANT  
MONITORING  
SYSTEM