



Introductions

Kevin Liu

Track:

Computer Engineering

Class:

Sophomore



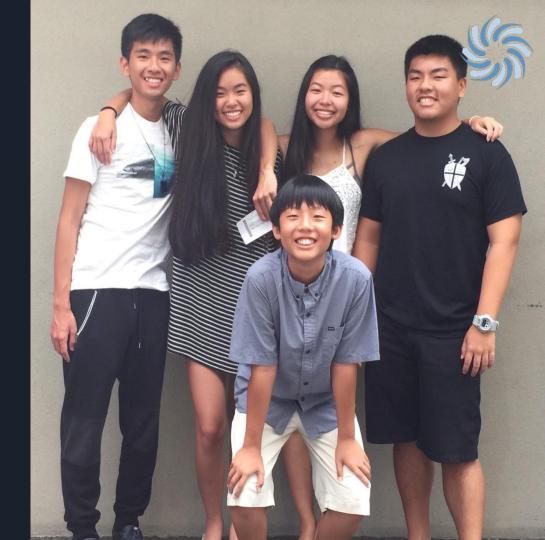
Alex Wong

Track:

Electrophysics

Class Standing:

Sophomore



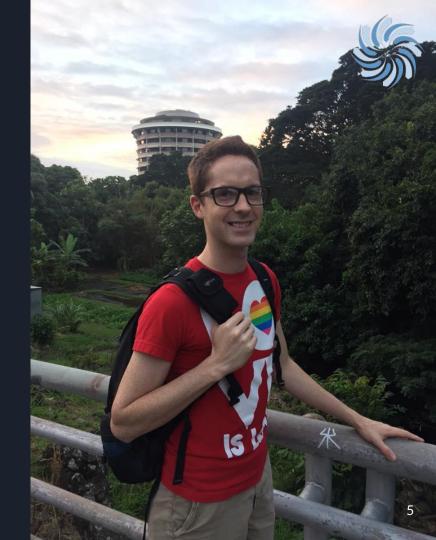
Joseph McConnell

Track:

Electro-physics

Class Standing:

Sophomore



Motivation



- Make UH Manoa a microgrid that is self-sustainable
- Gather weather and power consumption usage information
- Help reduce UH Manoa's carbon footprint and tuition costs
- Save Mother Nature



Project Overview



Design, build, and deploy a WeatherBox

- Collects weather data to be used to measure environmental data
- Solar-powered, low-cost device that can be easily reproduced
- Deploying on roofs of UH Manoa buildings



Semester Goals



- Acquire and independently apply design techniques
 - Arduino Uno
 - Eagle
 - Soldering
- Improve our presentation and networking skills
- Build a functioning, compact, cost-efficient prototype WeatherBox







- Completed tutorials
 - Arduino
 - Embedded Systems
- Tested sensors
 - Solar Irradiance (SP215)
 - Temperature & Humidity (SHT11)
 - Pressure/Temperature/Humidity (BME280)





09/23/17

Presentations

Training

Modules

Build

Test

Reports

Proposal

Final

Arduino

Preliminary Design

Critical Review

Microprocessor Transciever Antenna **Charging Circuit** Battery

Temperature Sensor Solar Irradiance Senor **Humidity Sensor** Pressure Sensor Solar Panel

System Integration Overall System Firmware (PCB)

Housing

Debug

Final Report



12/02/17

ject Schedule	
	Team Pineapple

11/10/17

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		Team Pineapple														
		Gantt Chart														
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	14	
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	Team Pineapple														
	Gantt Chart														
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Date	9/4/2017	9/11/2017	9/18/2017	9/25/2017	10/2/2017	10/9/2017	10/16/2017	10/23/2017	10/30/2017	11/6/2017	11/13/2017	11/20/2017	11/27/2017	12/4/2017	12/11/20

10/14/17

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- Continue Eagle tutorial
- Create Schematic for board
- PCB Design on Eagle
- Learn XBee







Questions ?

