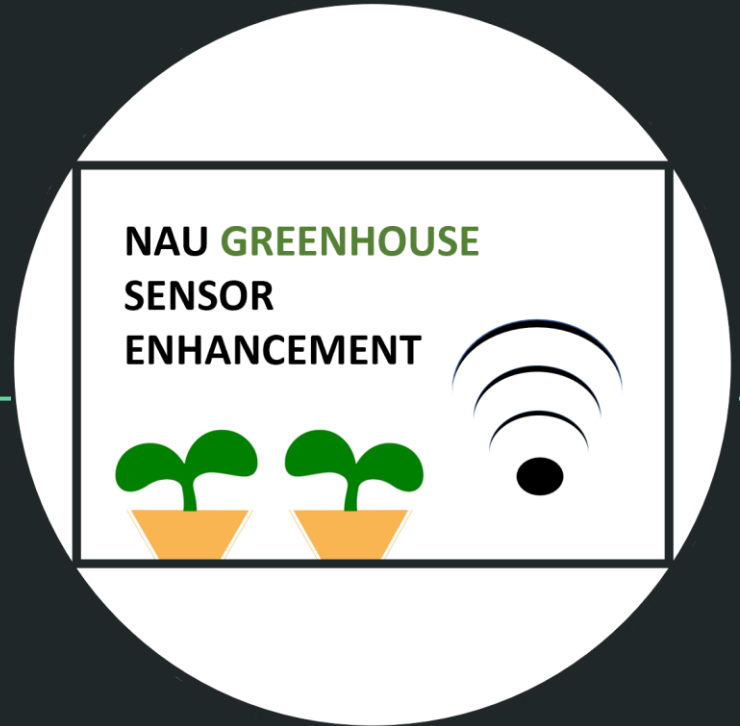


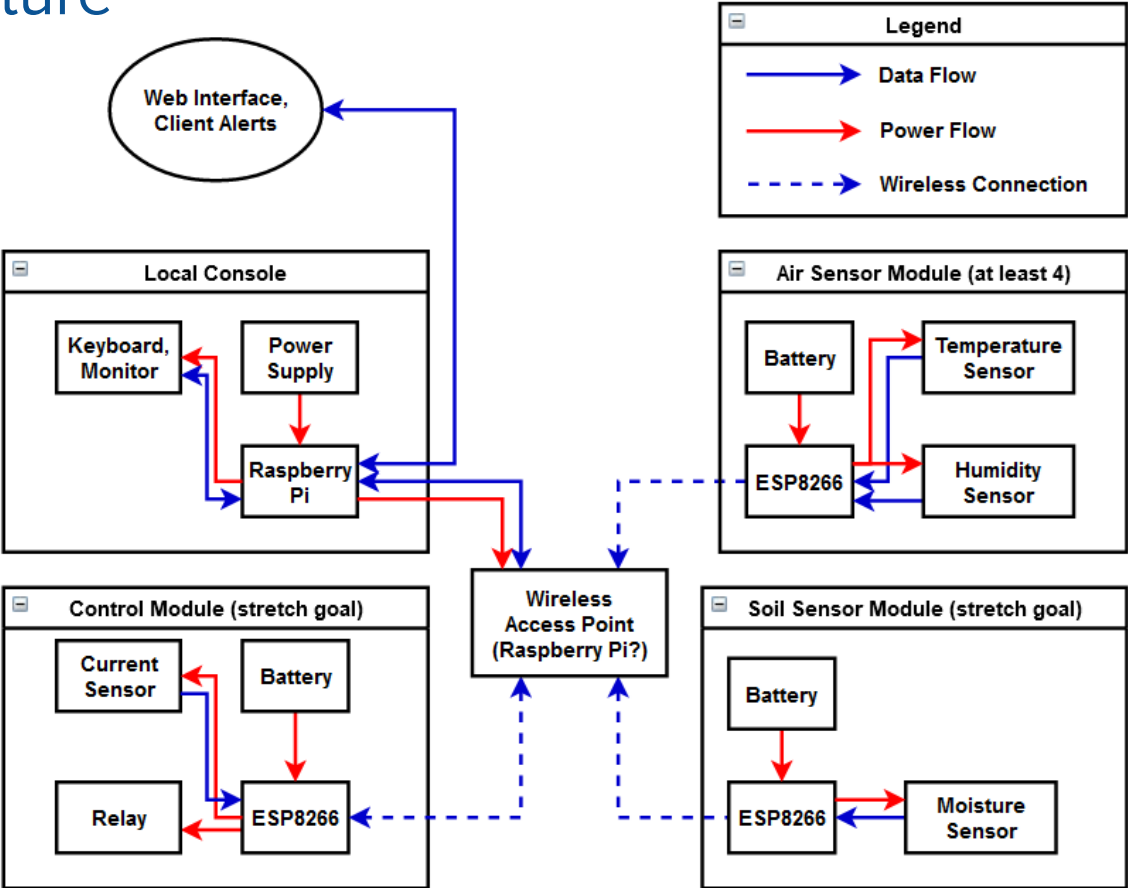
# Team Getting Green

Alexia Risley  
Emilia Connelly  
Jiaxin Liu  
Ruopeng Jia

October 15th, 2021

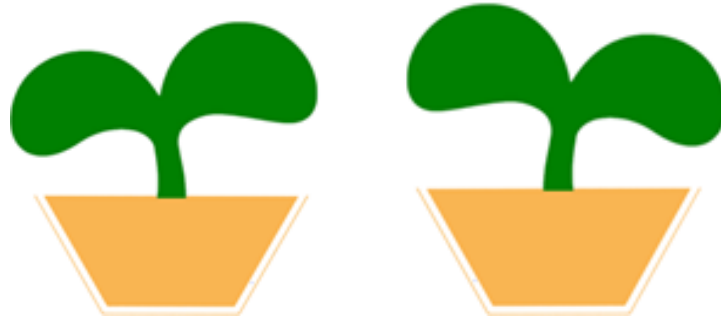


# System Architecture



# Environmental Sensing

- Install each house with at least two temperature sensors
- Equip the south house with one humidity sensors
- Desire that humidity and temperature sensors be within +/-5% accuracy
- Operable from 40°F to 120°F(temperature sensor)
- Operable from 0% to 100% (humidity sensor)
- Equip special soil humidity sensors as the client's requirements



# Logging Requirements

- The measurement period should be no more than 15 minutes to ensure timely feedback of data.
- Each measured data should be identified by the sensor and time.
- The system should at least have the ability to store data for 2 years.



# Presentation Requirements

- Have web access to the most current readings of humidity and temperature data
- Web accessible from off-campus without VPN
- Graphical representation of each sensor viewable using web
- Able to access a certain time interval of statistics
  - Ex. either week or a month
- Can access log of sensors' data
  - provided through the web



# Environmental Control Requirements

- System control of heater, so user may be able to adjust temperature
- System control of wet wall and exhaust fan
- Control at least two air mixing fans for convection
- Fans waterproofed for wet locations
- Fans will not be battery powered



# Alerting Requirements

- Notification sent to smartphone when sensors exceed threshold
  - User adjustment of threshold values
- Presented in concise, numerical format
- Notifications sent within 5 minutes of threshold violation
- Notification sent within 5 minutes of sensor failure
- Provided additional sensors in case of failure
  - Client may self-maintain or seek engineering student assistance



# Packaging Requirements

- No solderless breadboards or temporary equipment at the end of project
- Adherence to relevant safety standards
- Equipment operating above 12V shall comply with the National Electrical Code.





# Thank you for Listening to our Presentation!

From saplings to plants,

We make the world

More green and less polluted.

Together, we can revive

The decaying environment.

