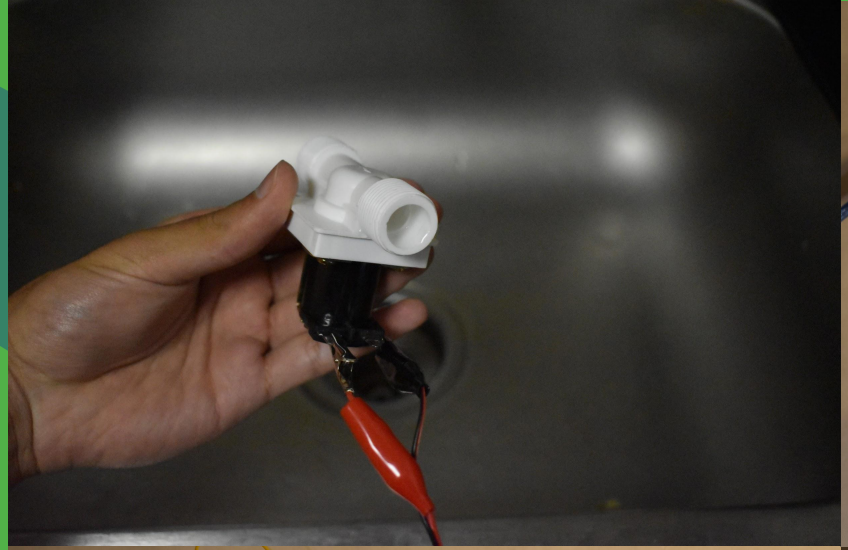
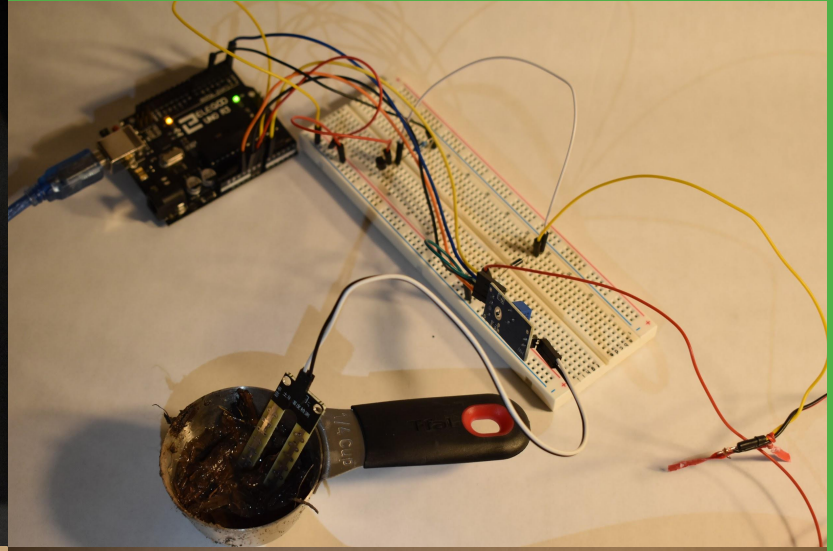
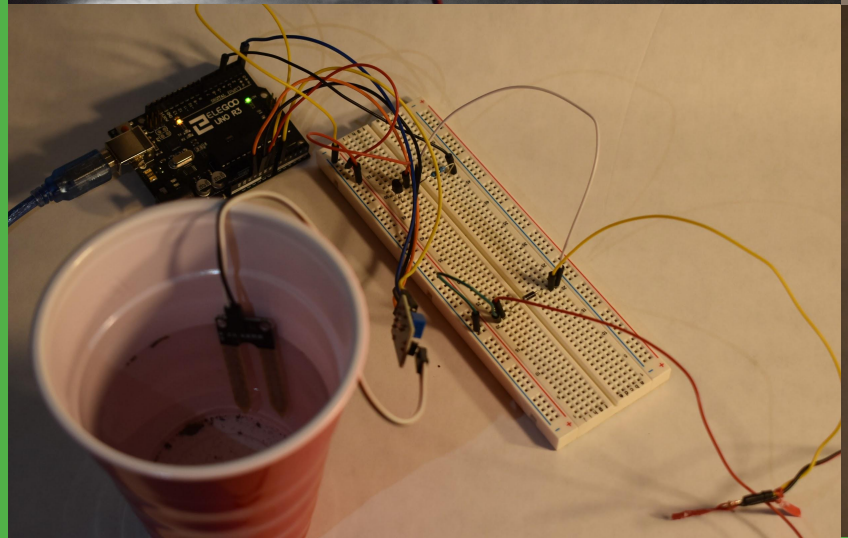
Water Smarter

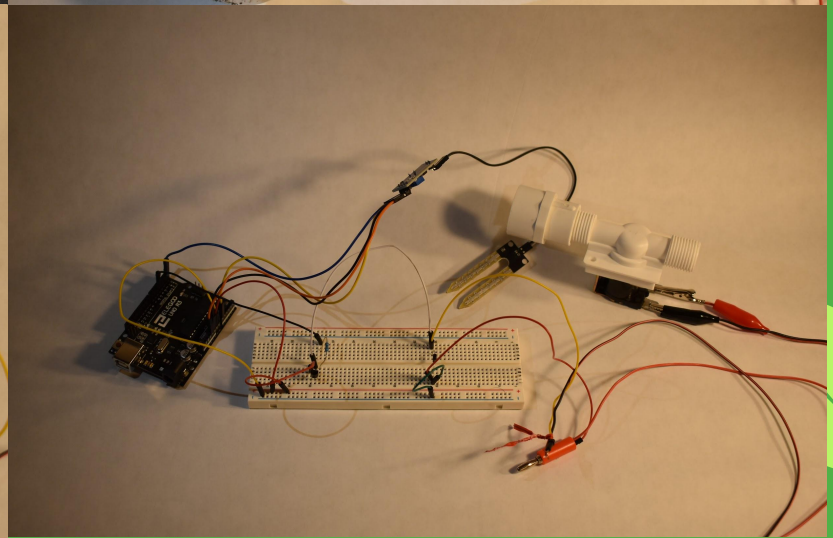
Nelson Fernandes, Owen Johnson, Shirley Jiang
TreeHacks 2021 | Feb 12 - Feb 14

Giving plants the right amount of water is not only good for the plant but good for the planet.



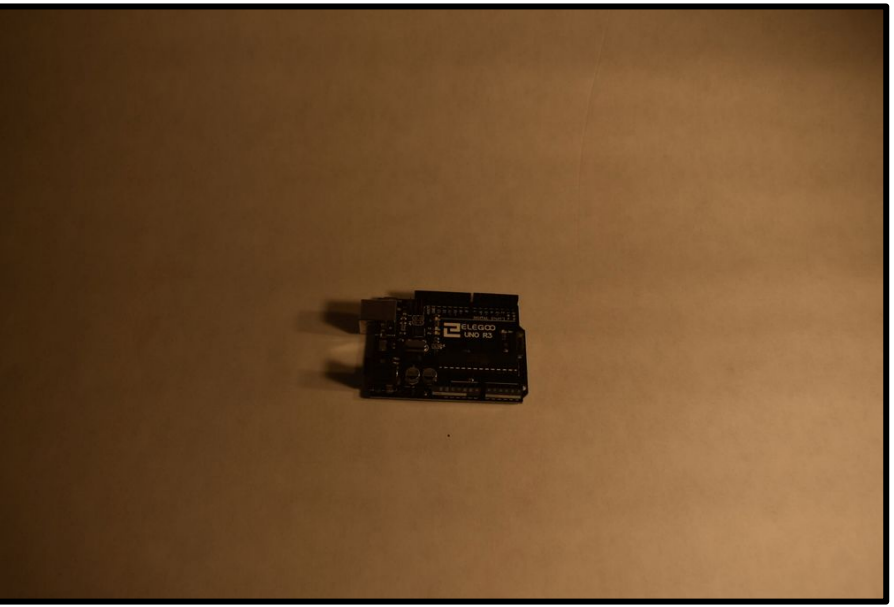






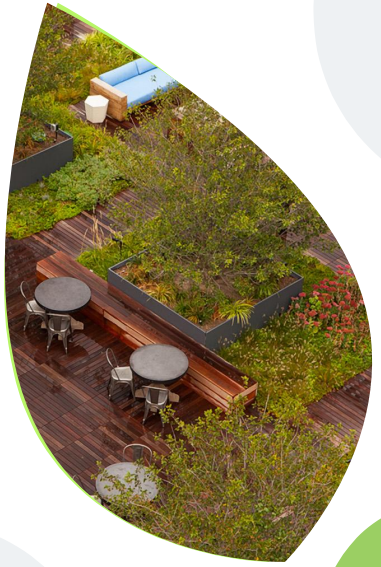
How might we...

Water smarter?



What is Water Smarter?

- An automated watering system controlled with:
  - Arduino UNO
  - Raspberry Pi 4, Model B
  - Solenoid Valve
  - Soil moisture sensor
- Connected a Python web server for data retrieval and storage



Why Water Smarter?

- Reducing labor needed for garden maintenance
- Water conservation
- Scalability

Scalability

Potted Plant

- 1 plant
- 1 system

Backyard Gardens

- Several plant types
- 3-5 systems

Rooftop Gardens

- Community use
- Low maintenance
- 5+ systems

Future Plans

- UI
- Casing
- Weather forecast adjustments
- Produce planting suggestion feature

THANK YOU!

NELSON
linkedin.com/in/nelsonfernandesjr/

OWEN
linkedin.com/in/owen-johnson27/

SHIRLEY
linkedin.com/in/jiangshirley/