

Proposed Project Description

Team Name: PLANT: Plant. Liquefying. Automatic. Notification. Tool.

List of team members (5 maximum):

Bobby Lukasiewicz

Tanner Morreale

Silvio Azzam

Will Bernath

Brief Project Description:

1-2 paragraphs describing what problem you are solving and what your project does.

Our project centers around a device that monitors and corrects low saturation levels of household plants. The device will include the features listed in the next section to monitor the plant's health and potential needs, namely a humidity sensor, a temperature/sunlight sensor, and a plant identification input. With an attached water reservoir and water pump, the device will incur the sensors above to detect when the plant needs watering and employ a water drip or, if required, a constant flow for a preset amount of time or a preset amount of water. The amount of water required will be determined by the user specifying the plant they are monitoring and drawing the data from a database listing the plant's water needs based on various factors, including humidity, temperature, and sunlight. Additionally, the device will be able to alert the user's phone when the water levels available are too low and must be filled.

Features demonstrate on Demo Day:

List the **top 5** features that you are planning on demonstrating at the end of next semester.

1. Humidity sensor
2. Phone Alert
3. Pump to add water
4. Plant identification input
5. Temperature/Sunlight sensor

Technology Analysis:

There will likely be several technologies that will be necessary to complete your project. List any key technologies and show that they are available, affordable, and accessible. Note that each team's budget will be on the order of \$500 (depending on the final number of teams, team size, etc.). By accessible, I want you to show that you can reasonably incorporate the technology into your design.

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Humidity Sensor: Adafruit Industries LLC 4832, \$6.95

https://www.digikey.com/en/products/detail/adafruit-industries-llc/4832/14291407?utm_adgroup=&utm_source=google&utm_medium=cpc&utm_campaign=PMax%20Shopping_Product_Low%20ROAS%20Categories&utm_term=&utm_content=&utm_id=go_cmp-20243063506_adg-ad-dev-c-ext-prd-14291407_sig-CjwKCAiA3aeqBhBzEiwAxFiOBzl4l4kfU0QiR8t89Ry7bTj5gs9Agyr_D1RP6EyHEXKWK3Ds66GkcRoC8uYQAvD_BwE&gad_source=1&gclid=CjwKCAiA3aeqBhBzEiwAxFiOBzl4l4kfU0QiR8t89Ry7bTj5gs9Agyr_D1RP6EyHEXKWK3Ds66GkcRoC8uYQAvD_BwE

Temperature Sensor: LM61BIZ/NOPB, \$1.48

https://www.digikey.com/en/products/detail/texas-instruments/LM61BIZ%2FNOPB/367305?utm_adgroup=General&utm_source=google&utm_medium=cpc&utm_campaign=PMax%20Shopping_Product_Zombie%20SKUs&utm_term=&utm_content=General&utm_id=go_cmp-17815035045_adg-ad-dev-c-ext-prd-367305_sig-CjwKCAiA3aeqBhBzEiwAxFiOBvaFriDUzXdXHMYdlwtYJcweaBdAxTmjKgsCuL22a9TPTmbe9jABzBoCW6EQAvD_BwE&gad_source=1&gclid=CjwKCAiA3aeqBhBzEiwAxFiOBvaFriDUzXdXHMYdlwtYJcweaBdAxTmjKgsCuL22a9TPTmbe9jABzBoCW6EQAvD_BwE

Sunlight Sensor: 1528-4965-ND, \$4.50

<https://www.digikey.com/en/products/detail/adafruit-industries-llc/4681/12760934>

Water Pump: Adafruit Submersible 3V DC Water Pump, \$2.95

https://www.adafruit.com/product/4547?gad_source=1&gclid=CjwKCAiA3aeqBhBzEiwAxFiOBm4iSDK0ewEyxMhklf59dFFug1x6rldTJuulhQoP2STk6ihm4KNF5hoCXVvQAvD_BwE

Water level sensor: Adafruit Industries LLC 4965, \$1.95

https://www.digikey.com/en/products/detail/adafruit-industries-llc/4965/14302510?utm_adgroup=&utm_source=google&utm_medium=cpc&utm_campaign=PMax%20Shopping_Product_High%20ROAS%20Categories&utm_term=&utm_content=&gad_source=1&gclid=CjwKCAiA3aeqBhBzEiwAxFiOBuZpizxYPB0-uKzZsZGdds2WmCgDyHkXCqT6ECHQG-Nbjp1GxhGpBBoCtLAQAvD_BwE

Total Cost: \$17.83