

Submission Date
Project Name
Student Names
Project repository
Sensors Effectors choices
The database will store
The mobile device functionality will include
I will be collaborating with the following company/department
My group in the winter semester will include
50 word problem statement
100 words of background
Current product APA citation
Existing research IEEE paper APA citation
Brief description of planned purchases
Solution description

2019-09-10
Greenhouse System Scale Model
Ryan McAdie, Daniel Bujold, and Aiden Waadallah
<a href="https://github.com/McAdieCENG/CENGProject">https://github.com/McAdieCENG/CENGProject</a>
BME280 For Temp and Humidity, EK1940 Soil Moisture Sensor
Temperature, Humidity, Soil Moisture Levels
The mobile application will display temp, humidity and soil moisture levels when the user logs in. They will also be given the option to access a camera to take a picture to post on social media
I will be collaborating with Humber Arboretum
Myself (Ryan McAdie), Daniel Bujold
The real life problem being solved by this project is that Humber arboretum and several other nurseries don't have a proper system to measure temperature, humidity and soil moisture levels. This monitoring system will help them to keep track of everything related to the health if the habitat.
Humber Arboretum needs a system to measure and display, in real-time, the appearance, temperature, humidity, and soil moisture of the plants in its nursery. Through an app, employees can view these measurements online. It will be connected to the firebase database through the internet. Firebase server will hold all the levels measured by the sensors and will send it to the mobile application. The mobile application will display those levels on the screen when the user's login. There is an additional camera option in the app which will allow users to click the picture and share it on social media.
(n.d.). Monnit Remote Monitoring Systems for Greenhouse Monitoring. Retrieved from <a href="https://www.monnit.com/solutions/greenhouse-monitoring">https://www.monnit.com/solutions/greenhouse-monitoring</a> Labbate, E. (2018, March 19). Greenhouse Sensor Systems for Real Time Monitoring and Control Greenhouse Automation Systems. Retrieved from <a href="https://www.climatecontrol.com/blog/greenhouse-sensor-systems/">https://www.climatecontrol.com/blog/greenhouse-sensor-systems/</a>
An IoT-Based Traceability System for Greenhouse Seedling Crops G. Ramirez-González (2018). . IEEE Access, 6, 67528-67535. <a href="https://ieeexplore.ieee.org/document/8502066">https://ieeexplore.ieee.org/document/8502066</a>
A Raspberry Pi, a BME280 sensor, an EK1940 sensor and possibly a camera that we can hook up to the RPi to take remote photos
To build a device capable of reading temperature, humidity and soil moisture to be used in plant nurseries. Along with a constructed mobile application that can be used to access a database to show users real-time information regarding temp, humidity and soil moisture