

Senior Design Team Formation Report

September 8, 2020

This is a report on the discussion of Senior Design (Capstone) Project for the class of 2021. The group includes three students: **Alan Trester** (Electrical Engineering), **Sadie Gladden** (Computer Engineering), and **Zuguang Liu** (Electrical Engineering).

1 Project Concept

An automatic garden monitoring and care system that utilizes a wireless modular design in order to fit a variety of use cases and scenarios. The system will be able to provide detailed information about garden vital statistics and use this information to automatically care for the plants.

2 Assigned Tasks

A brief breakdown of the tasks are drafted below.

- Firmware Development & System Architect - Alan Trester
 - Design and implement system architecture
 - Research methods of communication protocols
 - Implement methods for specific features
- Frontend Development - Sadie Gladden
 - Application creation
 - UX/UI design and development
 - Ensure ease of access to system information and functionality
 - Assisting in firmware design
- Hardware Specification - Zuguang Liu
 - Research on the specific hardware used to implement functionalities
 - Draft a Bill of Material on the hardware
 - Design circuit and circuit boards to complete the implementation

3 Advisors

We have asked **Dr. Zachariah Fuchs** (fuchsze@ucmail.uc.edu) regarding the project advising as well as **Dr. Carla Purdy** (purdyc@ucmail.uc.edu) regarding the fulfillment for embedded system minor. Confirmation from the advisors are pending.

4 Meeting Times

We anticipate to have 6-8 hours of meeting per week. Specific meeting time is to be discussed.