

# Executive Summary for EcoSense

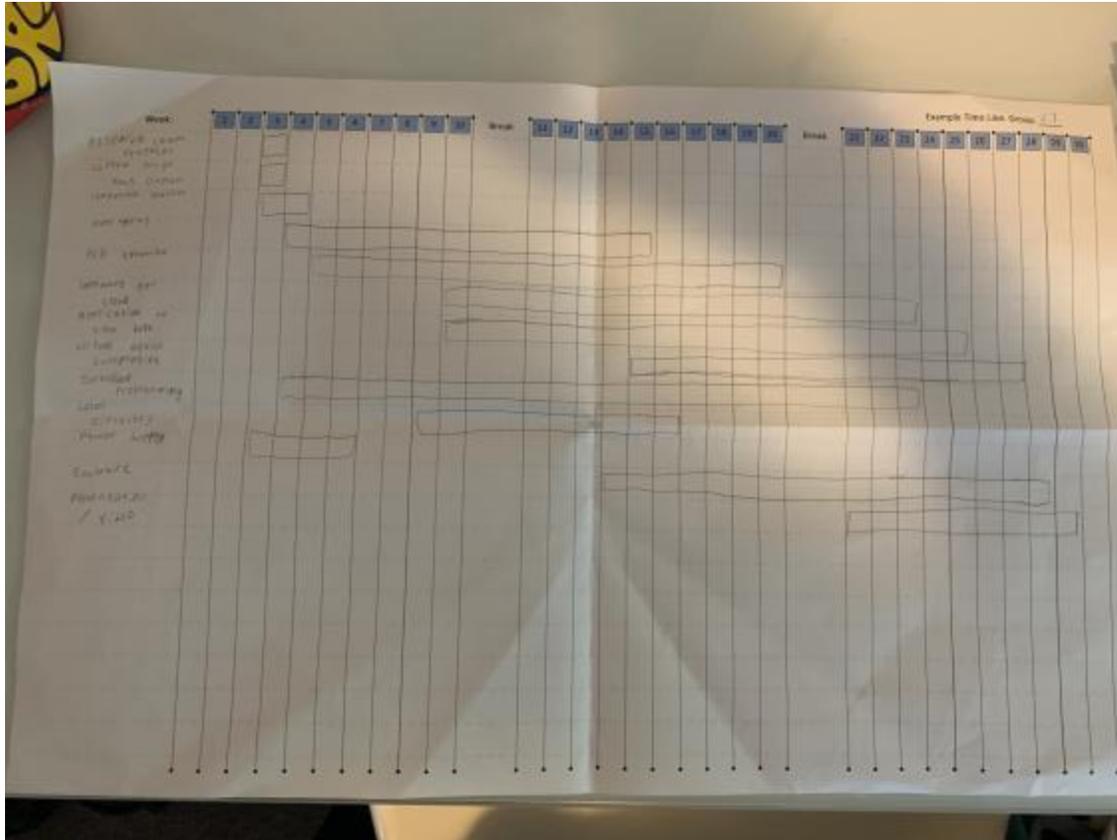
## Original Design Problem

EcoSense is a smart home device that was created for the Internet of Things product competition. Our initial product design was aimed towards allowing homeowners to track environmental statistics to help them more effectively automate and tend to their outdoor gardens. With EcoSense, users can track data such as air temperature, humidity, soil moisture, and light intensity and then automate the use of things such as their sprinkler and HVAC systems as a result of the data gathered. The excess use of water when taking care of a garden is an ever rising issue, but EcoSense can help by automating water systems to only turn on when the soil moisture is low.

## Approach to project

As a team, we approached this project by breaking it down into three phases. The initial phase involved project planning and coordination where we created designs and rough drafts of how we wanted the project to look. The second phase was the action phase. Here, we divided the required tasks up equally to all team members based on our strengths and got to work. By the end of this phase, we had a semi-completed model for our project. The last phase involved all of the finishing touches that were required to complete EcoSense. During this phase, we completed things such as project documentation and required presentations. We also made minor adjustments to the overall design in order to produce a product at the highest quality that we could. Over the course of the project, each phase lasted about three months. The overall project lasted nine months, starting in September of 2022 and finishing in June of 2023.

## Project timeline image



### Key lessons learned

Over this time period, our team gained a lot of experience working with others in a professional environment. We were able to strengthen our technical skills on topics such as hardware and software development and really learned what it takes to make a product that is ready for the consumer market. We also learned how valuable good communication can be as well as how important it is to document and report your progress when working on a project. With all of this said, the most important thing that our team learned is that we all enjoy working in the engineering field and are excited to see what's next on the horizon.