Bike Team 2

Junior Design

03/11/2022

Project Summary

The problem our group was tasked with solving was creating an automatic and easily visible bike light system. The Bike lights needed to indicate braking and intensity of the braking, as well as turning. Our system was also designed to run off of a rechargeable battery and indicate the remaining battery life to the user. The dashboard of the system is designed to show speed and also allow the user to select a turn or switch the system off. In order to tackle this problem, our group decided to brainstorm ideas and decide what blocks would be involved in the project and who would do what. Once we had a general idea of what we were doing we began individually assembling and buying parts for our respective blocks. We would go two weeks at a time and once each person had completed both blocks we began assembling the final project and combining everything together.
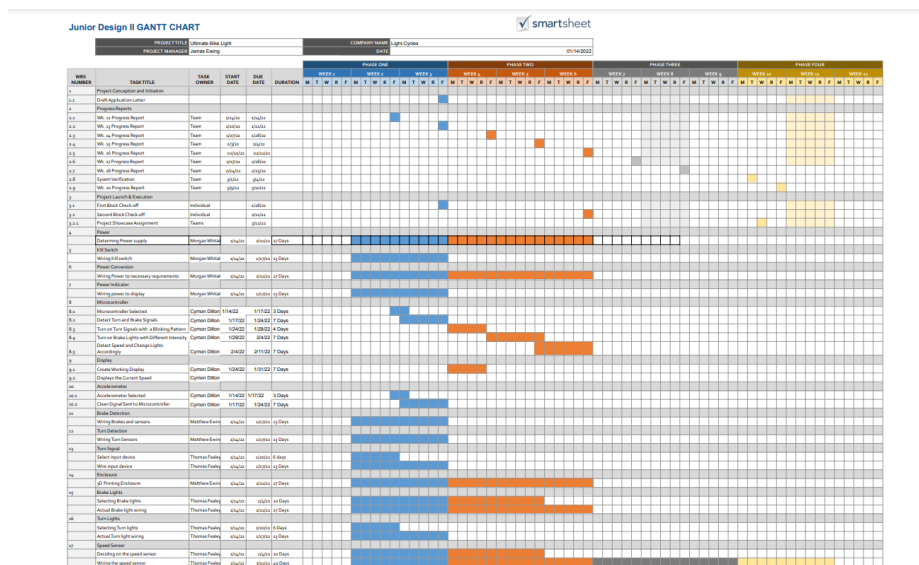
As a team we learned a lot of things, a lot of them revolving around the final assembly of the project. One of the main issues we had was revolving around i2c, and its propagation over a long distance. We learned its maximum distances and how to properly wire them in twisted patterns. Another thing we learned was about wire management and measuring many times and cutting once, since our enclosures ended up being on the smaller side for the amount of wires we had. Overall this project was a huge learning experience for everyone involved and will help us out in our future projects.