Portfolio

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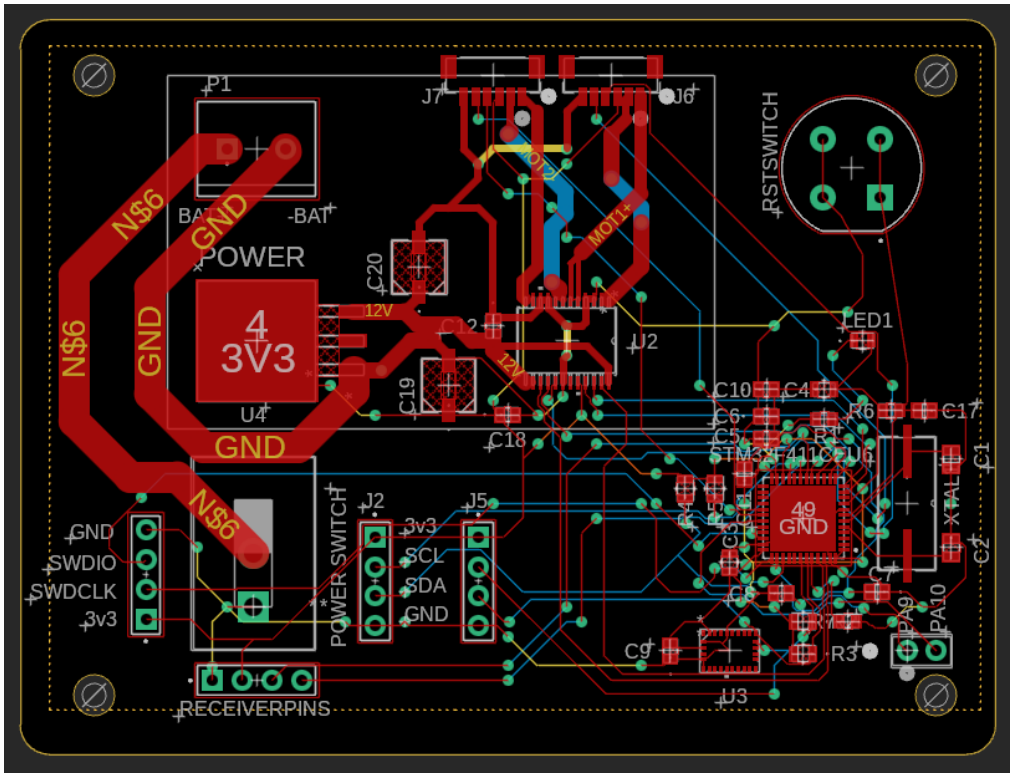
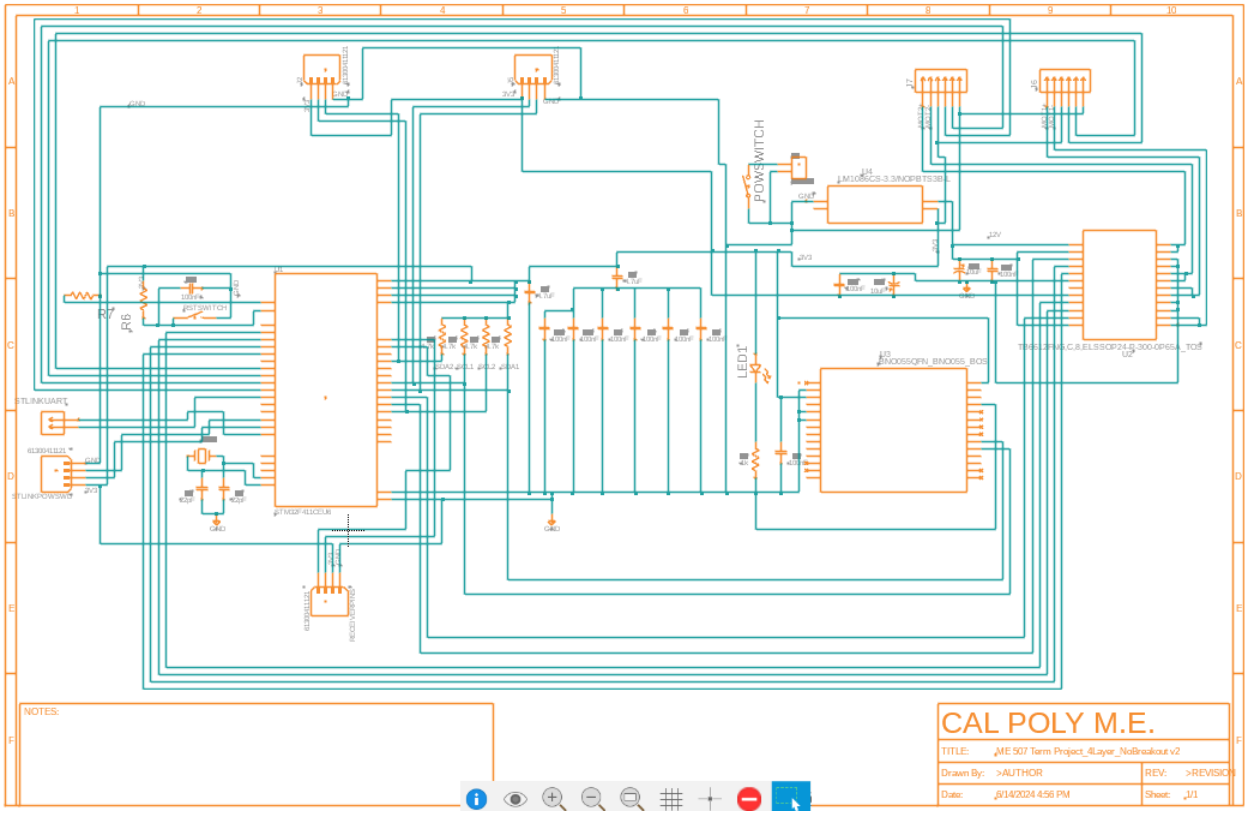
Project Overview:

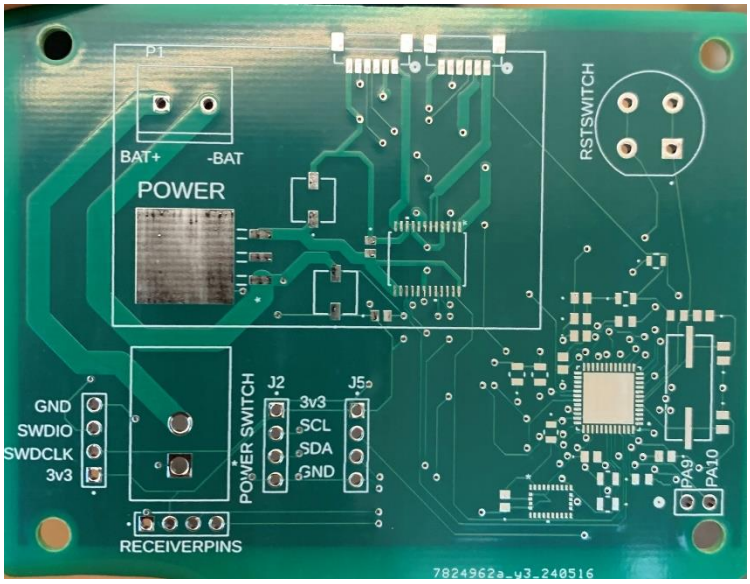
The goal of this project was to create a balancing robot! We designed the PCB from scratch, and had it manufactured. The bulk of the project was to get this PCB working, as first time designers. Images of the process can be seen below. Also, the code can be viewed in the GitHub Repository that this PDF is contained in. This project was a controls, manufacturing, and design challenge and we are proud to have completed a working prototype!



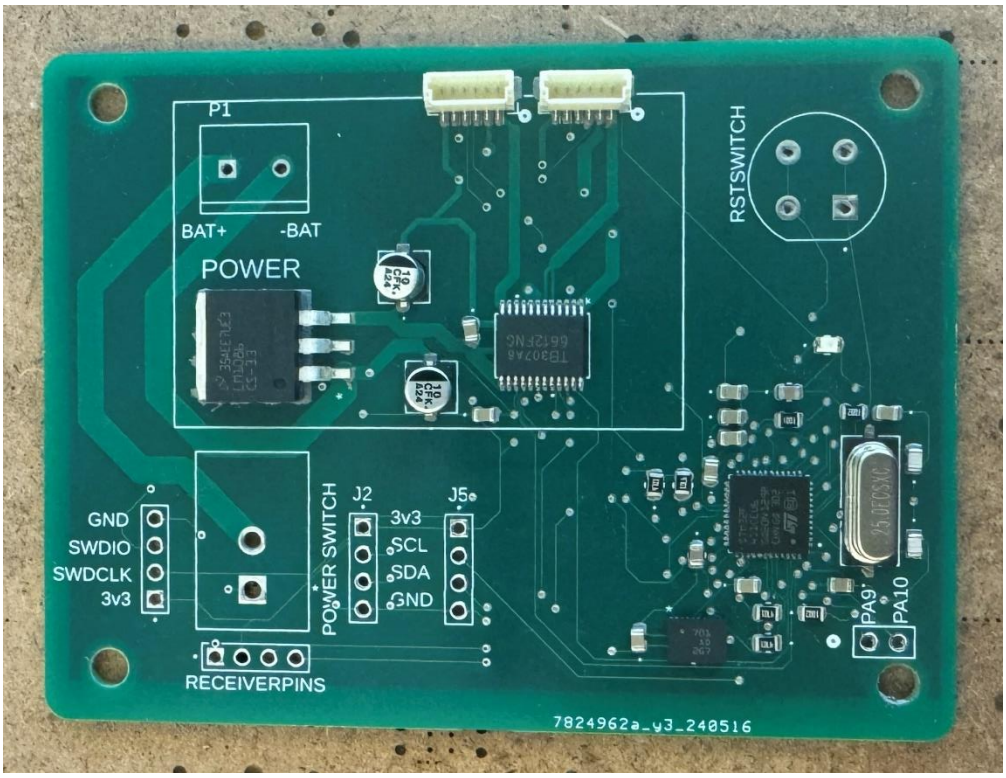
The PCB Design in Fusion 360



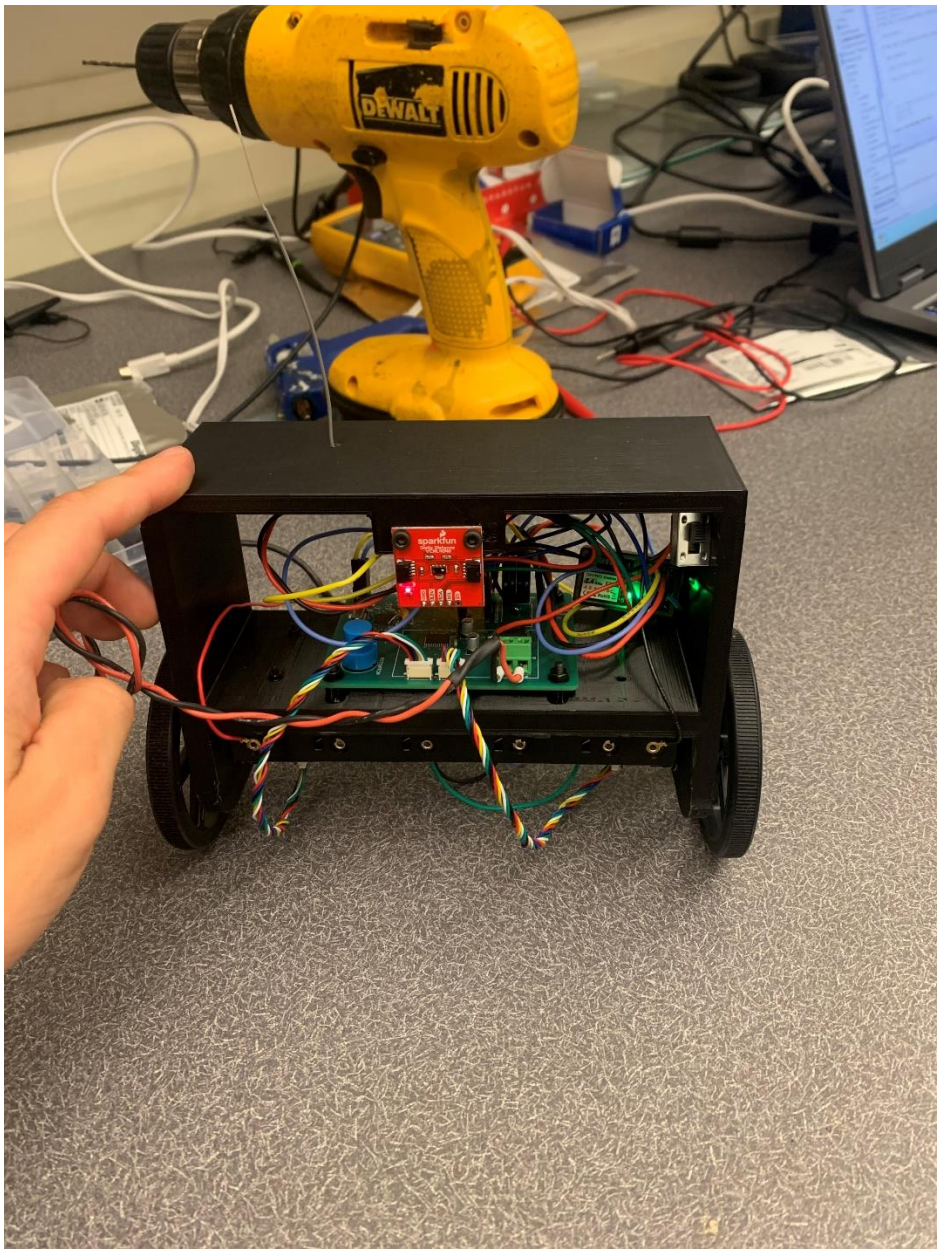
Fusion 360 Schematic



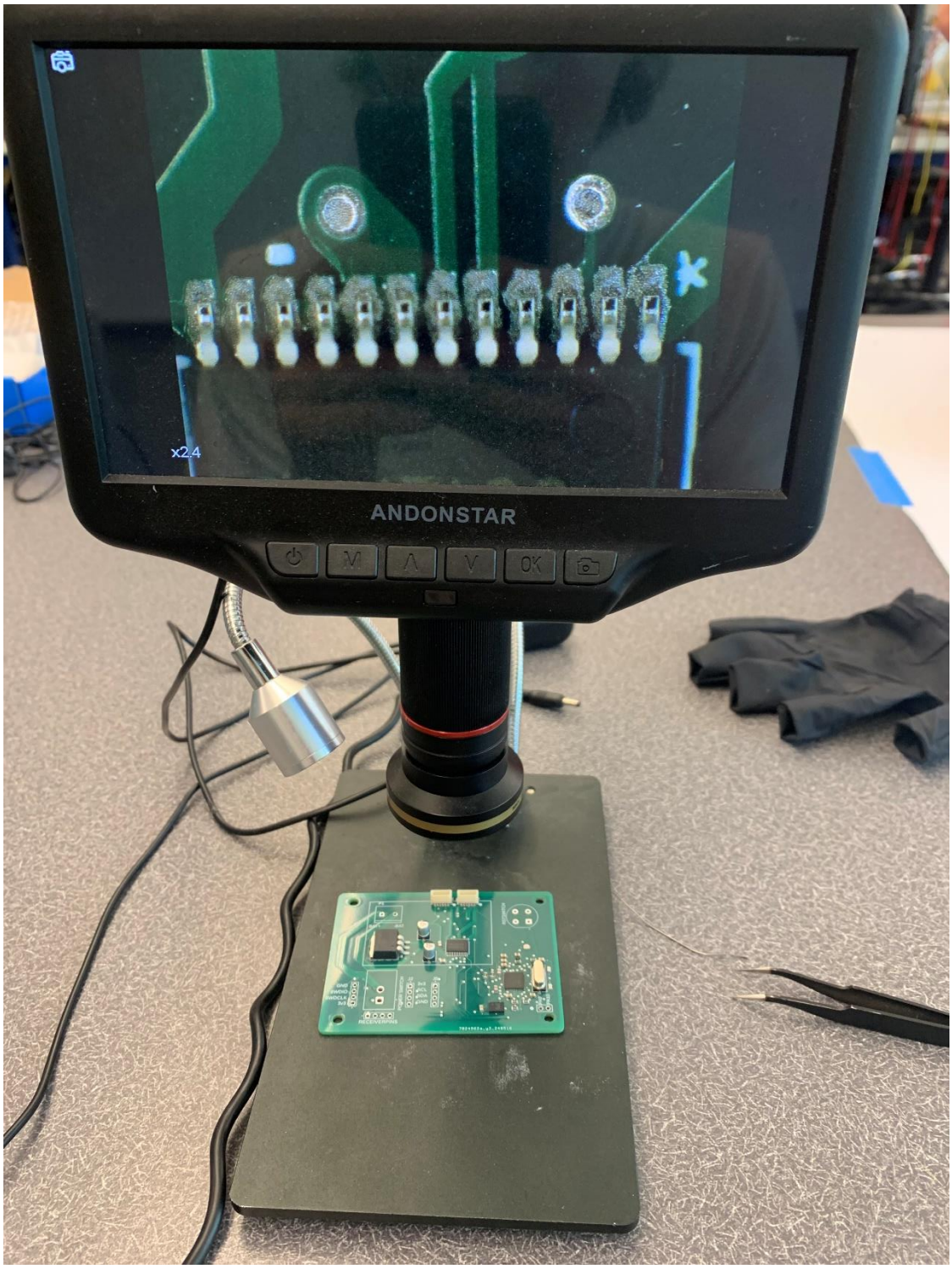
Physical PCB With no Components



The Board Populated with SMD components



Final Robot Design



Inspection of the PCB under a microscope

Preliminary Operation of the robot