Summary of Responsibilities and Duties Performed

NZ Technologies is an embedded systems research development company that uses capacitive sensors to create touchless HMI (human machine interfaces) for a wide number of applications. Originally, the company started out as strictly a medical device supplier for doctors to use in the operating room, however due to the pandemic the company’s development has shifted to a new field to create a market for touchless interfaces such as elevator panels in high contact areas. It is here where the company found a market in elevator panels, kiosks, and ATM’s where we provide prototypes and demos for companies to use our technology in any application they choose. Therefore, we are responsible for creating reliable equipment (mechanically and electrically) to showcase and push the limits of what touchless sensing is capable of.

Due to the semi-chaotic environment of a Startup company, the tasks and experience I received was far beyond anything I had initially expected when starting in September 2021. In my original projection, I had assumed that it would be a lot less dispersed regarding the work I would be undergoing. As an Embedded Hardware Engineering Co-op at NZ Technologies, my main overall responsibilities are specific to any projects that are currently in progress. Oftentimes, I would be fabricating and testing designs that my coworkers would. This fabrication process often included 3D printing and CNC’ing mechanical jigs, fabricating printed circuit boards with the companies in house circuit board printer, and soldering new circuit board prototypes as they would come from the manufacturer. When I was not working hands on, I would often find myself completing or assisting the completion of designs both electrical and mechanical whether it be component sourcing and research, designing jigs in Solidworks, participating in design decisions and discussions, testing new prototypes, or creating electrical schematics.