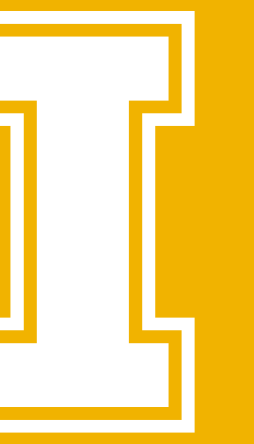




FORK TRUCK PENDANT CONTROLLER



BEN BUNCE, ROSS DUNWORTH, ERNESTO OROZCO, OAKLEY TODD, KATELYN KINSON

OBJECTIVE

Create an ergonomic and intuitive custom pendant controller to operate Bastian Solution's autonomous fork truck

BACKGROUND & VALUE PROPOSITION

- Few options on the market for industrial automated vehicles
- Current alternatives are not ergonomic, intuitive, or durable
- Lessons learned may be applied to other automated equipment



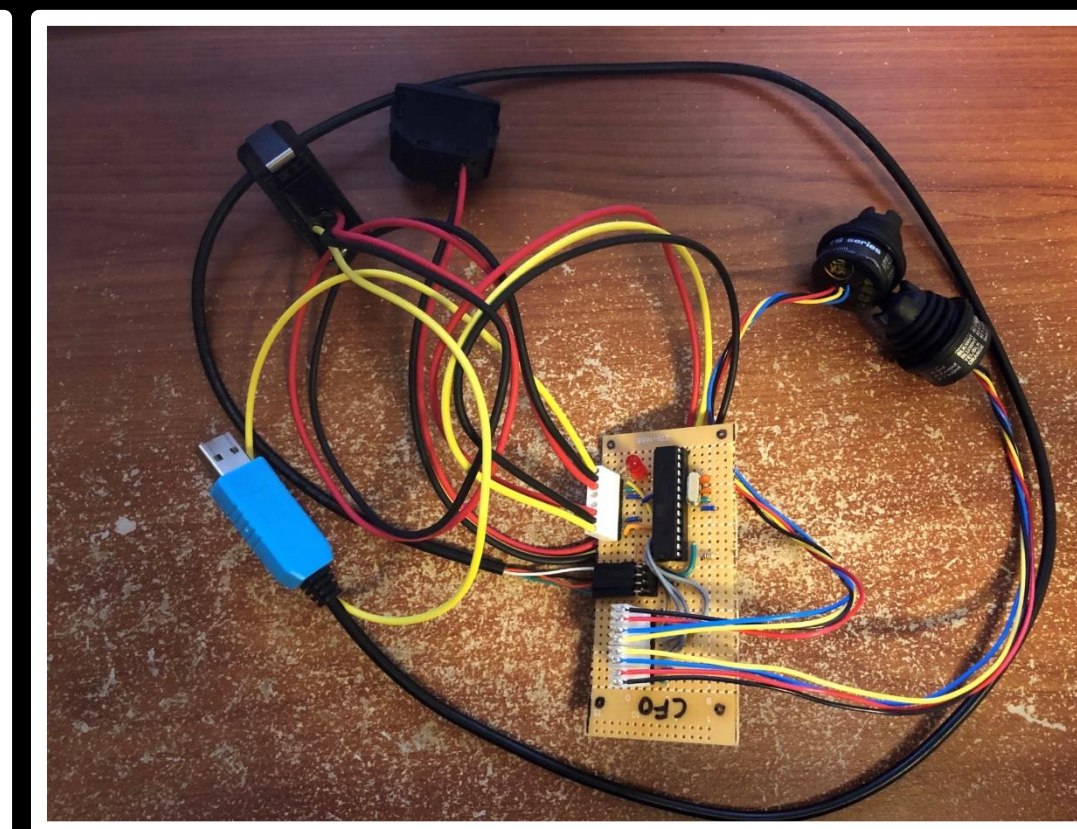
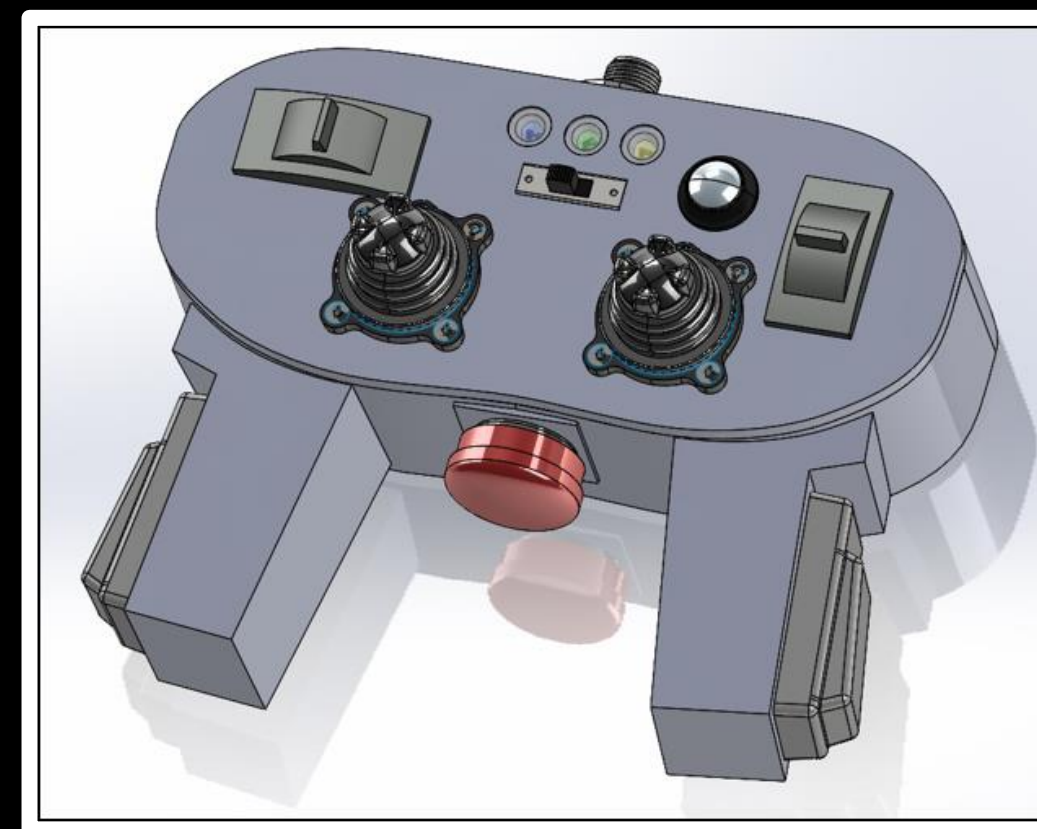
KEY REQUIREMENTS

- Ergonomic Button Placement
- Custom housing that withstands a 6 ft drop
- Redundant Safety System
- Designed for IP65 & ESD shock of +/- 15kV
- RS485/422 Communication

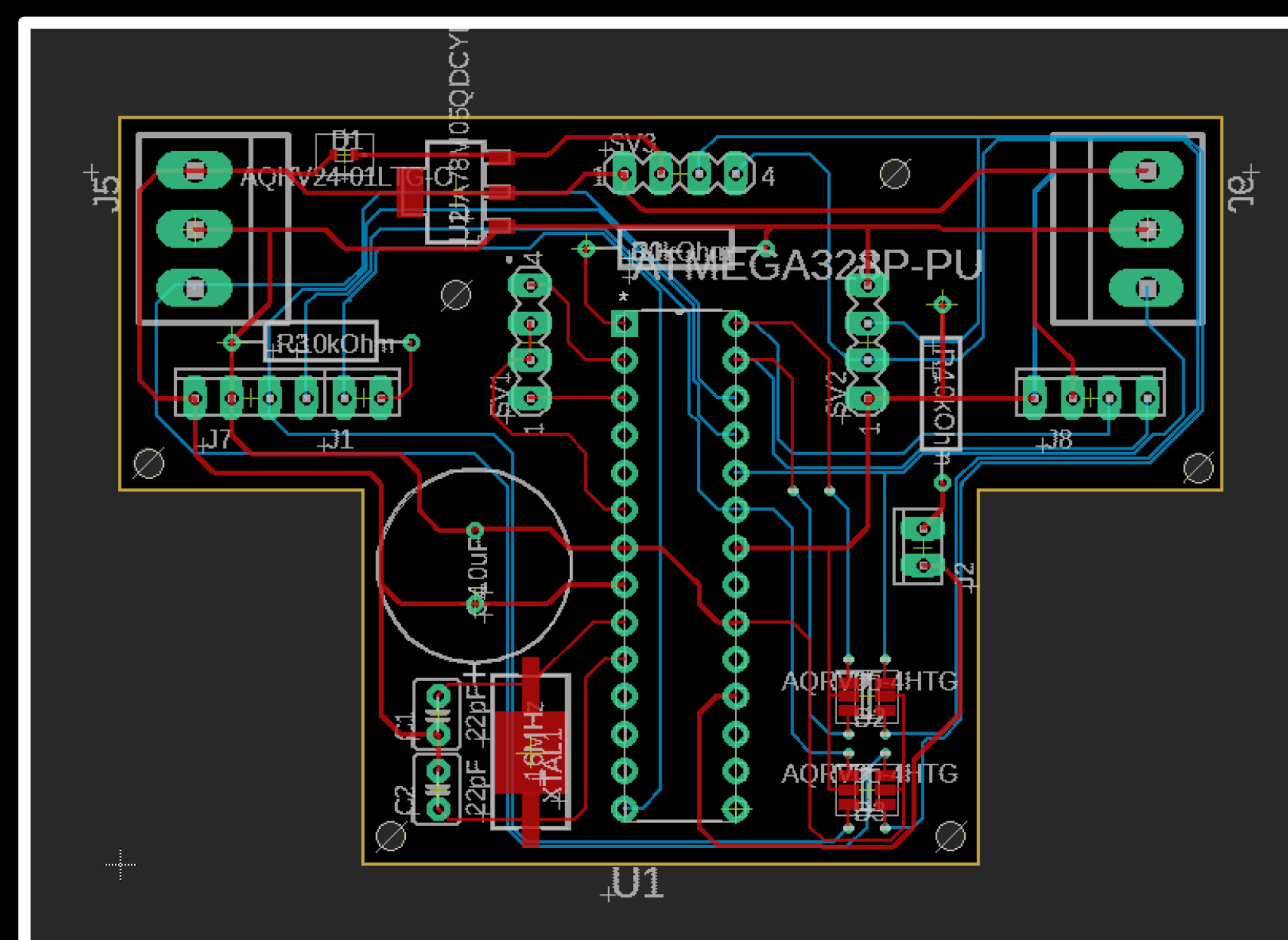
ACKNOWLEDGEMENTS

- Dr. Steven Beyerlein Instructor
- Anas Nawafleh Mentor
- Gabe Riggs Client

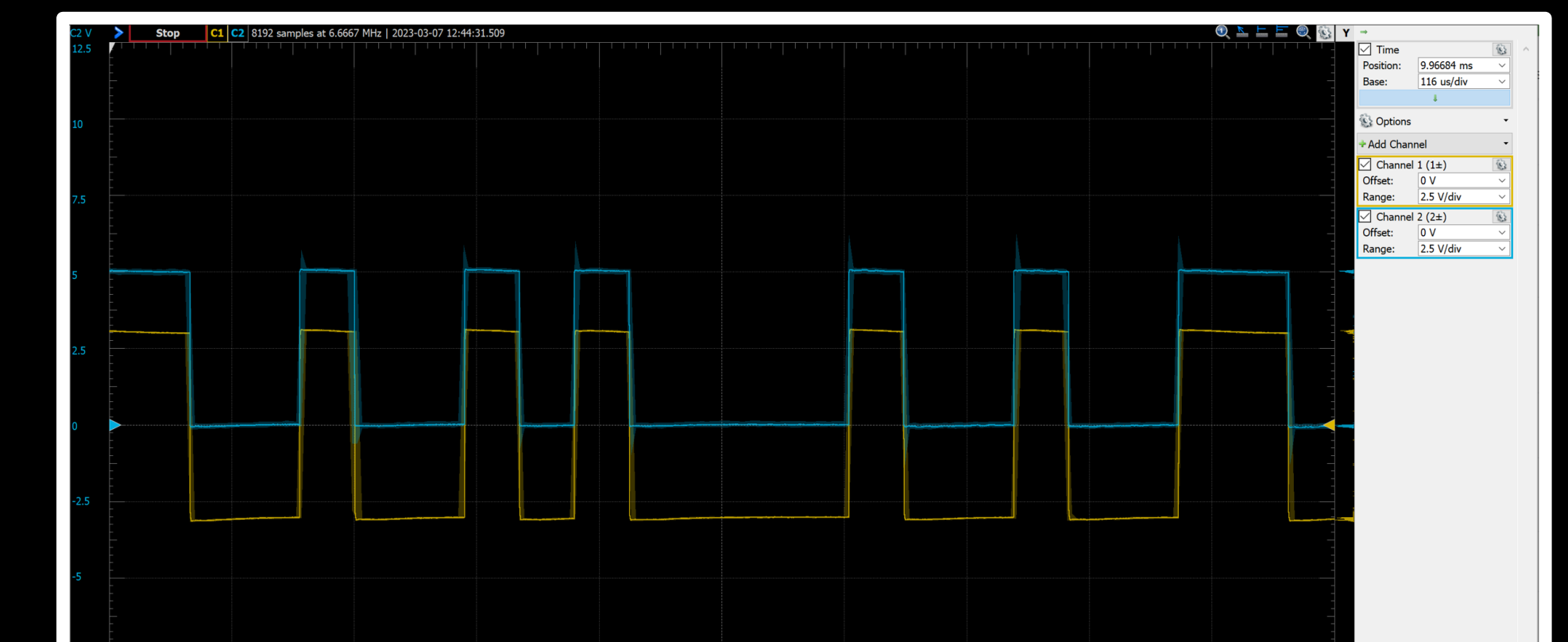
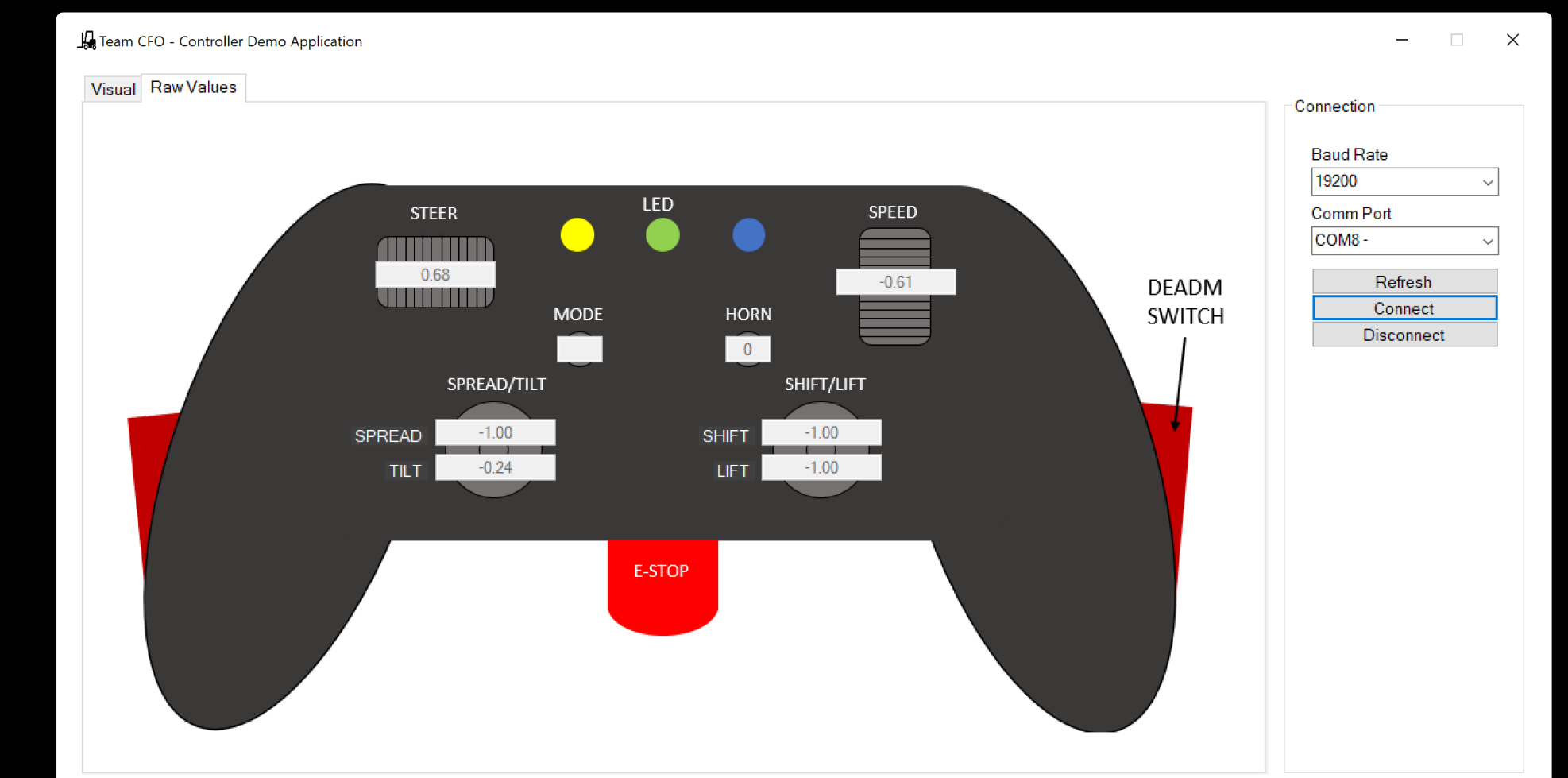
CONCEPT DEVELOPMENT



THE FINAL DESIGN



VALIDATION



RECOMMENDATIONS

- Look into smaller components to reduce size of controller
- Improve board design for better protection and reliability
- Further ergonomic development

CONCLUSION

Requirements of the project were met to produce a working proof of concept. Further development will be required to build an industry standard product.



2023 Capstone Project

