



Introduction

This year's Lafayette Formula Electric Vehicle team set out to finalise the efforts of previous years and finalize a working vehicle that meets the competition requirements.

We use a 4-segment accumulator container, passing through a Tractive System interface, to the Curtis 1238 Motor Controller.

TSV Voltage: 89.6 V

GLV Voltage: 24 V

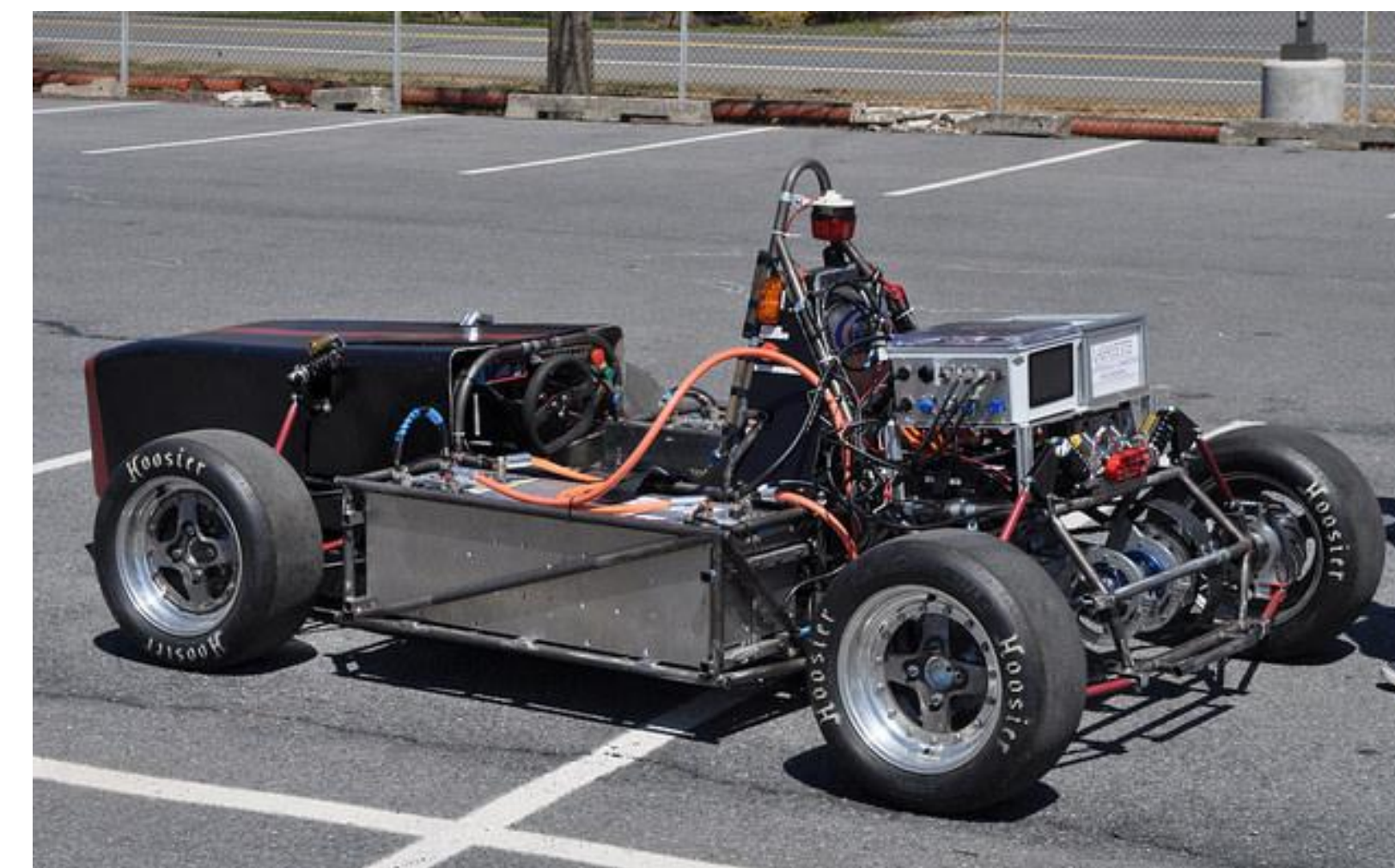
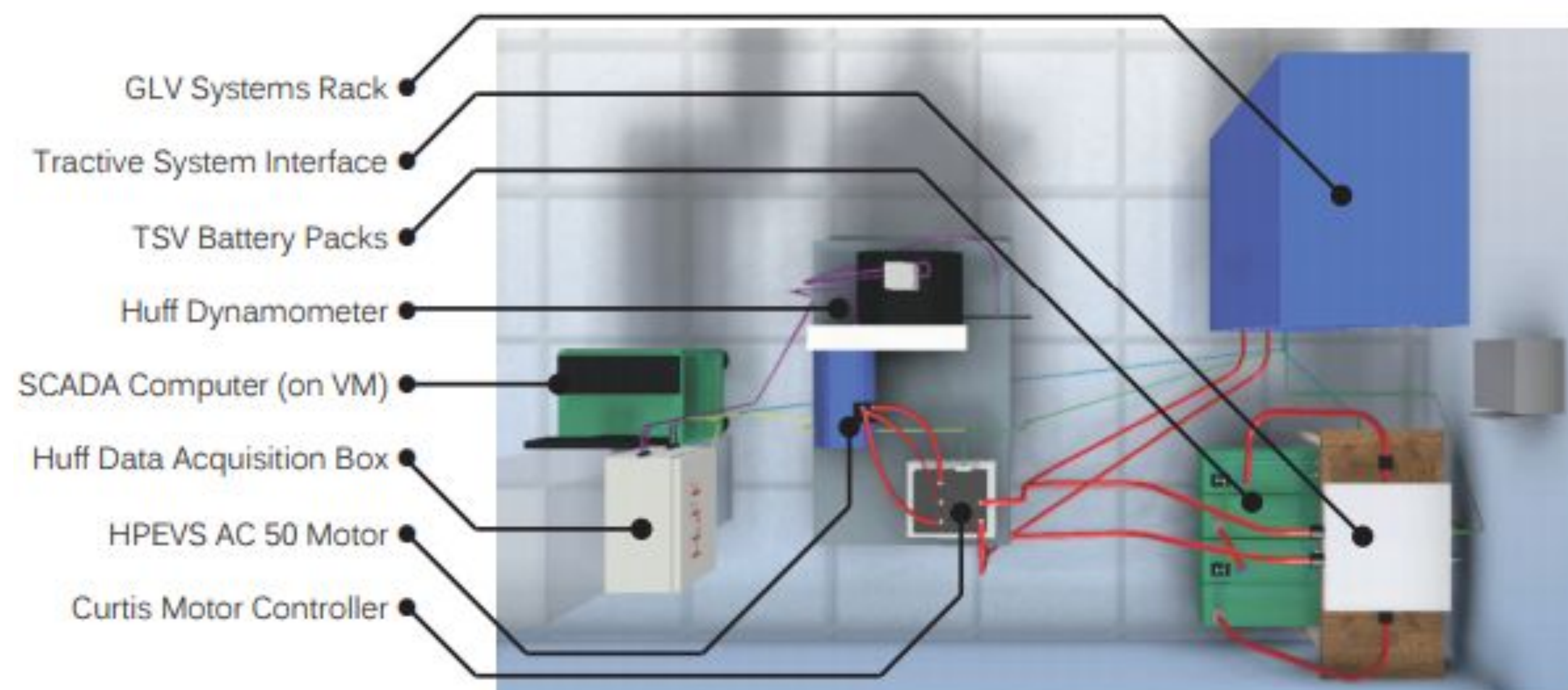
RPM Range: 0-4500 RPM

Rated Motor Power: 53 kW

TSV Capacity: 3.6 kWh

Several modifications were made including the Tractive System Interface and the VSCADA system.

Subsystems were individually tested, integrated with a dynamometer set up, and finally integrated with the mechanical systems.



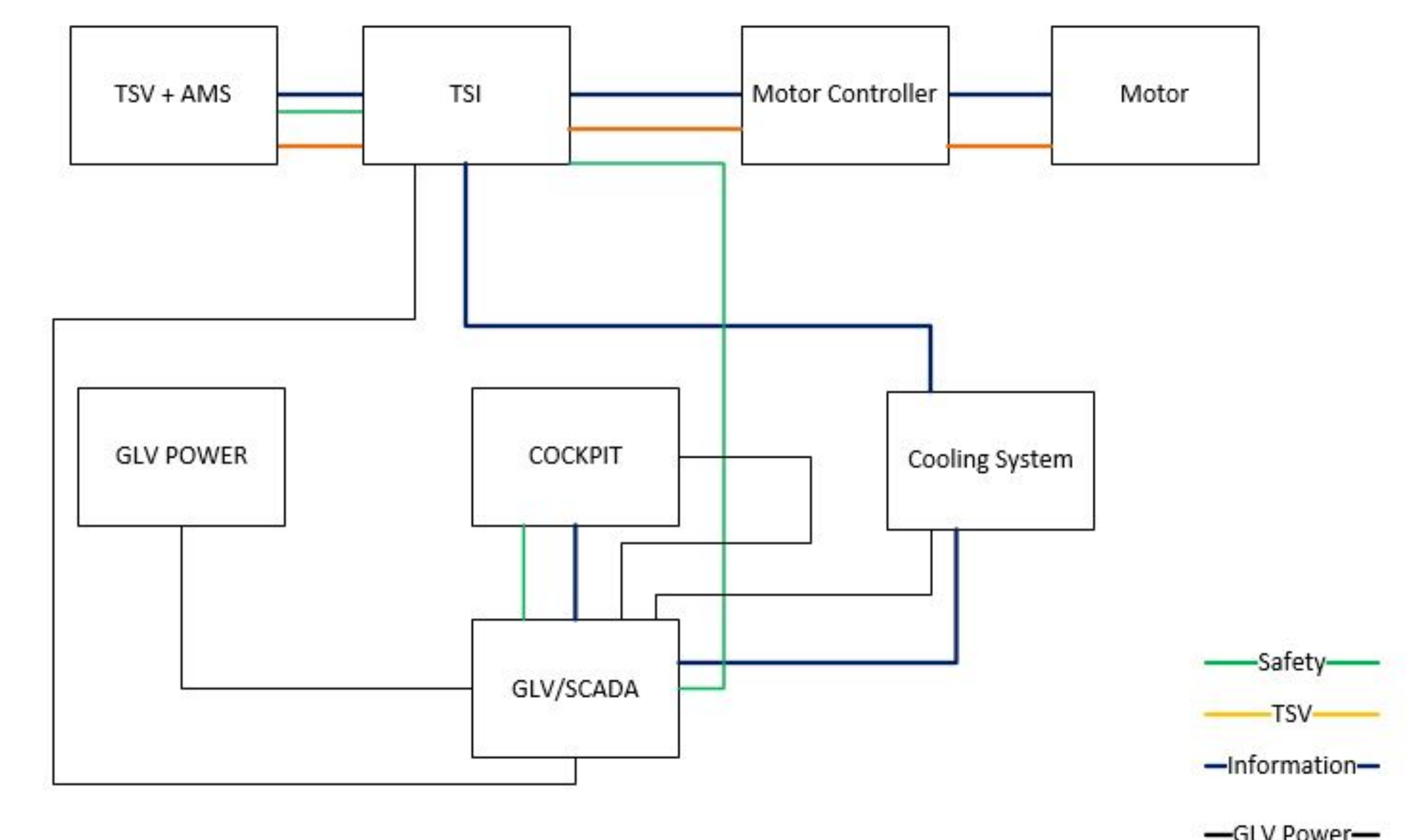
Our Team (Mechanical+Electrical)



Back Row: Rob, Taylor, Matt, Geoff, Joe, Cam, Tom, Jimmy
Mid Row : Kevin, Peter, Waseh, Connor, Amrit, Austin, Elliott, DeSean, John, Phil, Leo, Josh
Front Row: Alex, Kye, Sarah, Russell, Nakul, Mike
Not Pictured: Anders, Greg, Shuyu, Chen

System Diagram

- GLV power originates from the GLV battery, and supplies power to VSCADA and the safety loop components
- TSV power is generated by the accumulator, and interfaced using the TSI to the motor controller.
- System wide communication is via a CAN network.
- External Safety Controls are located on either side of the car and on the cockpit



Contact Information

Project Website: www.sites.Lafayette.edu/ece492-sp18
Project Engineer:: Waseh Ahmad 18'



Acknowledgements:

We are thankful to the Lafayette ECE department who gave us the support and trust to build this project as well as past teams that have all contributed to this endeavour.