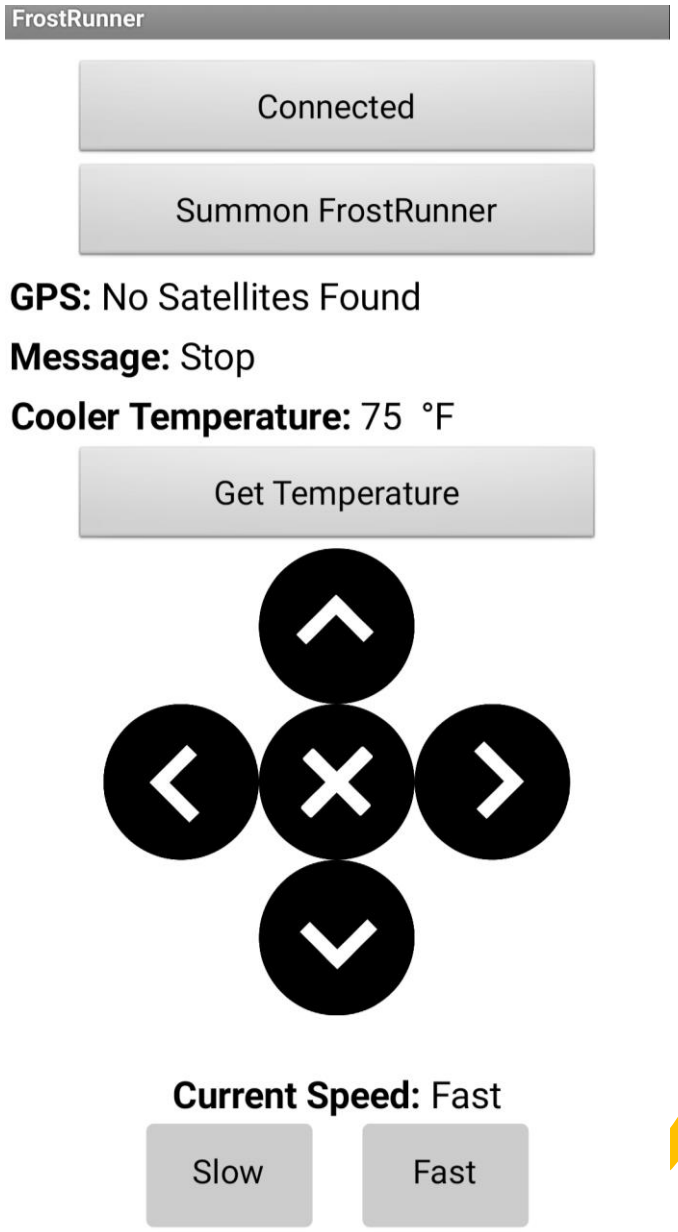
FrostRunner

Group 16

Manual Control

1. Forward
2. Reverse
3. Left Steering
4. Right Steering
5. Stop



Object Avoidance

- 3 ultrasonic sensors are installed on the front left, front right, and back of FrostRunner

Self Navigation

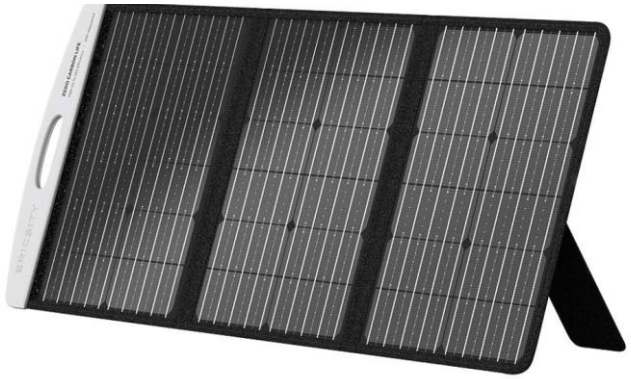
- Allow the car to move by itself using the coordinates sent by the app
- Use those coordinates to calculate the distance, bearing, and heading between FrostRunner and the user

Challenges

- GPS connectivity problems, particularly in poor weather and indoor conditions
- Delays in getting a GPS signal
- Short-distance accuracy issues

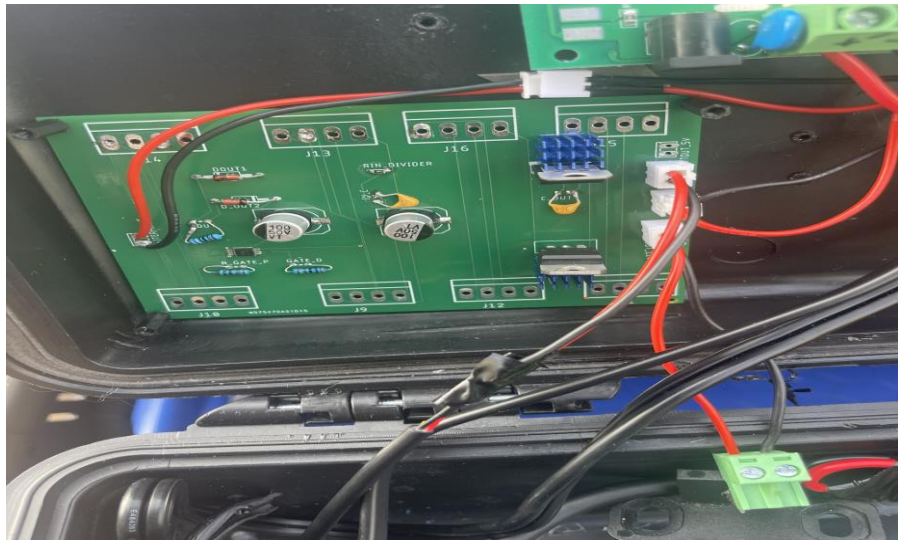
Solar And Batteries

- Solar Panels Producing 21.5 to 25 Volts
- Produced 21.5 Volts In Low Light
- Seal Lead Acid Battery, Lithium Battery



Circuit Protection, Voltage Regulator

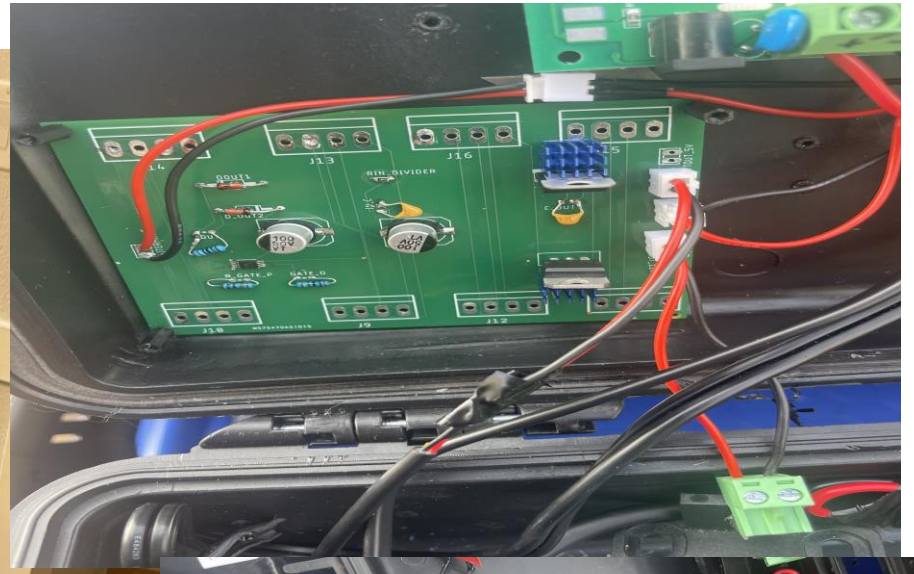
- PCB Reverse Polarity Protection Worked Without Issues
- PCB Produced 5 Volts As Expected
- Worked Perfectly

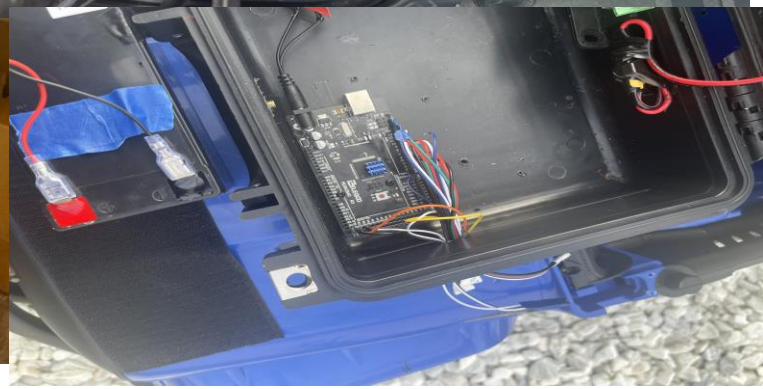


Complete Power Delivery System

- We Are Getting The Battery Charged.
- Motors are receiving Power
- We are providing 5 Volts to Our Sensors and Peripherals.

Challenges





Keeping the Wiring of the Entire Car Uniformed