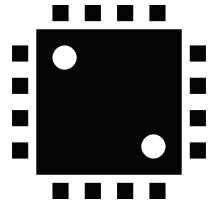




Ohm



An exploration into the future of transportation

Inspiration

The idea for Project Ohm initially came to fruition after three friends not having any idea of what to do for their i2 project, decided to build their own e-bike and in turn explore the intricate mechanics and engineering or electric drivetrains. In the end, our project aims to serve as an example and inspire others about engineering to explore and pursue their ideas and passions.

Components



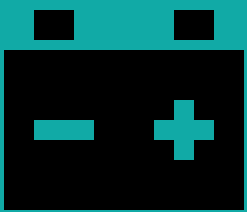
Bike

Currently, the bike we plan to convert is Brandon's mountain bike. Its Marin 6601 Ultralight Aluminum frame with a 9 speed cassette. We could possible take advantage of this existing wide range of gearing.



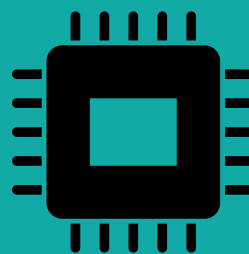
Motor

The motor we would be a brushless motor in order to make regenerative breaking a possibility. It would need a low kv rating in order make gearing easier.



Battery

The battery would be composed of dozens of 18650 cells spot welded in a configuration that would provide highest voltage and capacity.



ESC

The esc or electronic speed controller is a component that takes signals from the controller and power from the battery in order to control and power the motor.



Display

One feature that we want to add is some form of display on the handlebars displaying data like current seed, battery percentage, and power output.



Mounts

In order to attach all of the components to the bike, we will be using a mixture of 3d printed mounts and other methods including zip ties in order to securely mount parts into the system.