Jibebe Internship 2022

Progress report Week 3
Electric team

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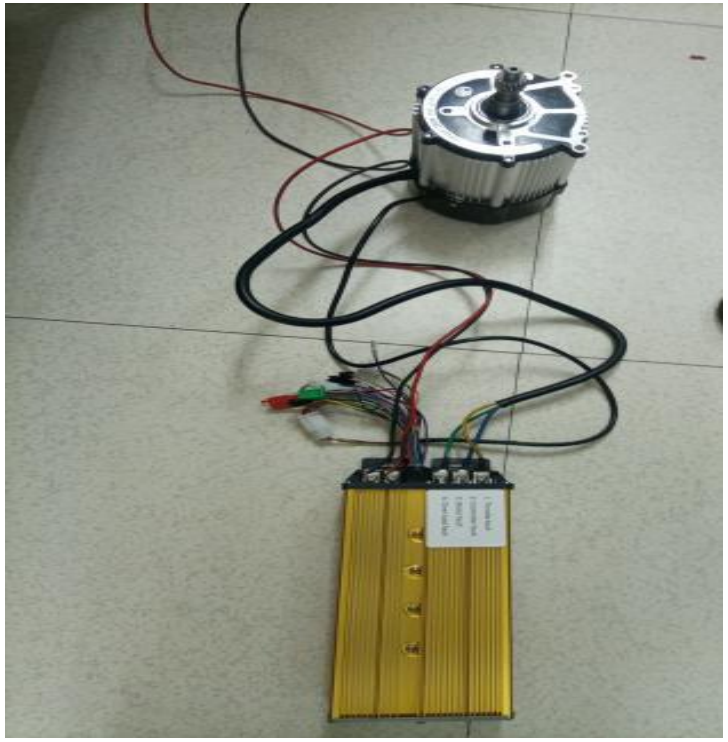
Tasks completed last week

[#5]BLDC Motor Acquiring: The team settled on utilizing the 1200W motor.

[#13] Determination of required electric components: This was a follow up issue where the team made contact with various suppliers to obtain such parts as the throttle switch and lithium battery.

[#14] Electrical system experiment: This occurred in the Safaricom labs with the aid of Mr. Kanja. The motor was connected to a 53.7v primary battery which powered the system in place of a secondary lithium battery which was yet to be acquired. The team also improvised a throttle switch with a potentiometer to vary the voltage supplied to the BLDC controller. This was necessary to determine the behaviour of the motor at start up.



Experimental setup

53.7V primary battery

Dynamometer used for torque measurements

Tasks in this week

- [#4] Charge controller acquiring
- [#18]Analysis of performance curves
- [#30] Getting experimental characteristics of loading motor
- [#34] Determination of components for tractor and calculation of their values

Timeline

Month	Intern Week	Tasks
Jan	Week 1	Design of required Battery Pack for Motor and Speed Control
	Week 2	Acquisition and procurement if required components
	Week 3	Testing of components fir tricycle and design of tractor electric system
Feb	Week 4	Integration of ordered parts to final tricycle implementation. Procurement of components for tractor
	Week 5	Solving miscellaneous issues arising from tricycle. Testing of tractor components
	Week 6	Testing of tractor components
	Week 7	Integration of final electric system of tractor
	Week 8	Integration with other subsystems