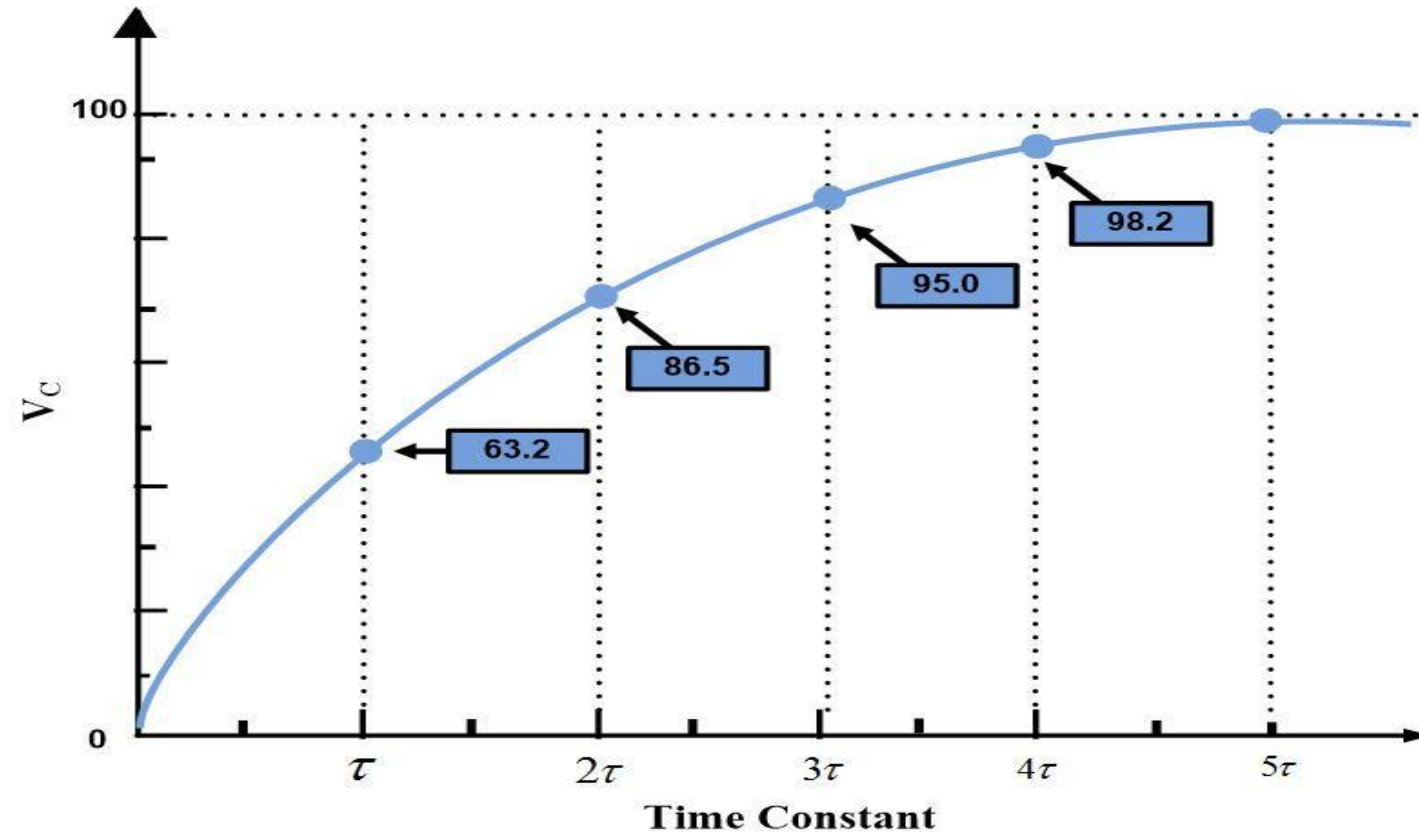# JIBEBE INTERNSHIP 2022

WEEKLY REPORT WEEK 9

ELIAS LAN'GAT

Tasks completed last week

[#70] Acceleration control_ The team managed to archive this using a RC circuit to introduce a delay of initially 9 sec but later modified to a delay of 30 sec. An experiment was done to check the voltage supply to the throttle switch as shown below.

100

V_C

63.2

86.5

95.0

98.2

0

τ 2τ 3τ 4τ 5τ

Time Constant

The effect of the delay circuit on the motor was observed to take effect using a laser tachometer and a conclusion made that the effect produced was a replica of the initial experiment that showed exponential relationship between the voltage supply against time.

[#69] Sourcing for quotations for the battery and motor for the e-tractor. Progress was also made by the team towards sourcing for quotations of 96V 200ah e-tractor battery

Tasks in this week

[#18] Assembly of the e-tricycle subsystems

[#67] Alpha testing of battery for the e-tricycle

Total estimation of weeks: 12

Week	Tasks	Reporting	Hrs	Month
5 - Requirements review				
5.1	Finalize on battery acquisition for the Tricycle	None	20	Feb
5.2	Finalize on motor and torque requirements for the Tractor	None	8	
5.3	Clarify best choice for motor orientation for use in Tractor to allow for automation	Team meeting to review the best course of action	5	
6 - Research				
6.1	Research and recommend best motor for our specific use case in the Tractor	Electric Team Meeting	20	Feb
6.2	Get experimental data for motors and run simulations for verification	None	20	
7 - Testing				
7.1	Alpha testing of newly arrived battery for the tricycle.	Electric Team Meeting	20	Feb
7.2	Testing of integration with other components of the electric subsytem	None	25	
8 - Deployment				
8.1	Deployment of the electric subsystem of tricycle to finalized Tricycle	None	20	March
8.2	Fixing of any issues that may arise during Integration	None	20	
9 - Testing				
9.1	Alpha testing of newly arrived components for the tricycle.	Electric meeting	16	March

9.2	Getting experimental resuts of the components and NDT to validate correct operation and performance under load	None	24	

10 - Integration				
10.1	Integration with other subsystem	Team meeting	40	March

11 - Testing				
9.1	Alpha testing of entire assembled tractor	Team meeting	40	March

12 - Deployment				
12.1	Deployment of Shujaa Tractor	Team meeting	40	April