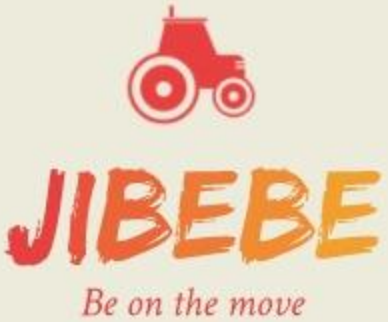
Internship 2022



Name: ALEX MBURU

Tasks completed in the last week

- [#54]Fabrication of the motor shaft coupler

- **[#56]Torque and gear ratio calculations**

Case 1:Working mode

For a working speed of 11km/h(72.95rpm)
Torque from motor=27.28Nm
Torque required at the wheels=1800Nm
Gear ratio=47.98

Case 2:Driving mode

For a driving speed of 30km/h(198.97rpm)
Torque from motor=27.28Nm
Torque required at the wheels=479.98Nm
Gear ratio=17.59

- [#63]Vibrational analysis of the chassis

(see document on Github)

Tasks to be completed in this week

- [#56]Select the gearbox for the shujaa tractor
- [#31]Final assembly of the tricycle
- [#64]Acquisition of parts for the shujaa tractor

Month	Intern week	Tasks
Jan	Week 1	Taking measurements and 3D modeling of the tricycle Identification of parts
	Week 2	Design of chain drive, Shaft design Disassembly of the tricycle
Feb	Week 3	Acquisition of parts Fabrication and assembly of the tricycle Literature review on e-tractors
	Week 4	Identification of parts to be replaced Calculation of power requirements for the shujaa tractor Measurement of chassis
	Week 5	Design of various transmission components 3D modeling of the Shujaa tractor
	Week 6	Vibration and stress analysis Acquisition of parts
March	Week 7	Fabrication and assembly of Shujaa tractor
	Week 8	Testing and performance analysis