# Internship 2022

# Progress report on E-tricycle

Name: Alex Mburu

# Tasks completed last week

- [#31] Acquisition of parts
  - Steering handle
  - Brake disc kit
  - Sprockets

- [#31]Fabrication and assembly of the tricycle

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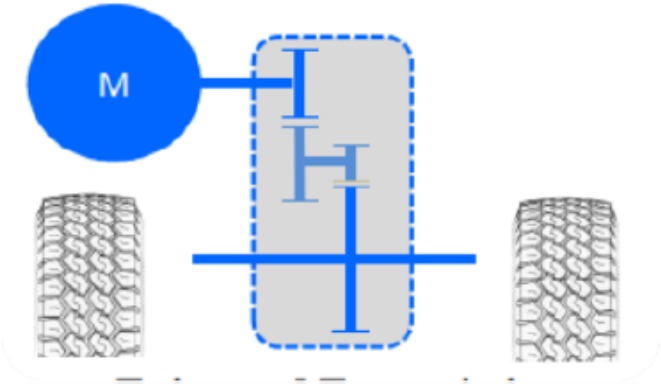
- **Literature review on e-tractors**

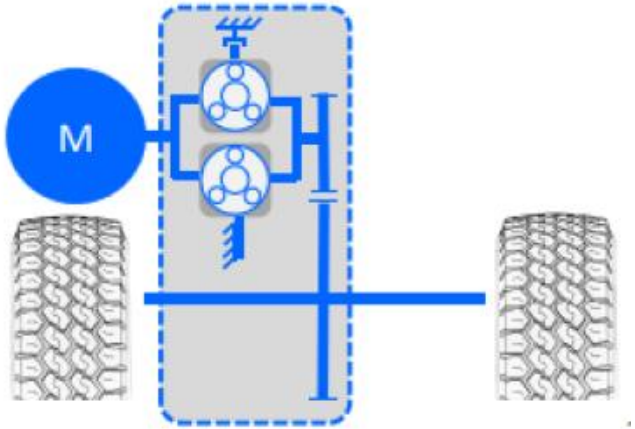
Transmission system

*Single speed transmission*




Only one gear pair used
Speed constant
Single reduction gear
Reverted gear
Compound gear

*Multispeed transmission*




Two different gear ratios can be used
Compound planetary gears used
Efficiency can be optimised

# Tasks in this week

- #40 Measurement of chassis
- #41 Identification of parts to be replaced
- #42 3D modeling of the chassis parts

# Timeline

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