



# Tusubira Joshua Kiboigo

Automotive and Power Engineering student

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## PROFILE

Automotive and Power Engineering student at Kyambogo University with practical experience in motor vehicle repair, CAD design, machining, and foundry operations from industrial training.

I strong interest in power systems and propulsion technologies. Proven leadership as class and student association executive, showcasing effective communication and organizational skills.

Fast learner with a problem-solving mindset, ready to apply engineering principles in industrial settings.

## EXPERIENCE

### Kyambogo University Mechanical Workshop

Intern

- Conducted suspension system inspections and identified basic faults.
- Performed maintenance and troubleshooting on cooling systems.
- Executed basic checks on transmissions and drivetrains.
- Utilized diagnostic reasoning for mechanical fault identification.
- Assisted with jacking, lifting, and adherence to workshop safety procedures.
- Created 2D technical drawings and 3D part models using CAD software.
- Interpreted mechanical drawings and converted concepts into manufacturable designs.

## EDUCATION

2024 – Present  
Kampala

### Bachelor of Engineering in Automotive and Power Engineering

Kyambogo University

GPA: 4.55

Member of Kyambogo University Automotive and Power Engineering Students Association (Year 2 representative)  
Class coordinator

2021 – 2023  
Kampala

### UACE

Mackay Memorial College Nateete

2017 – 2021

### UCE

Destiny Christian High School Luweero

2009 – 2016

### PLE

Buganda Road Primary School

## SKILLS

**SolidWorks**  
(CSWA certified)

**Python programming**  
(Intermediate)

**Mechanical diagnostics**

**Time management**

**Interpersonal communication**

**Creative problem solving**

**Proactive learner**

**Leadership qualities**

**Workplace safety**

**Engineering ethics understanding**

**Safety protocols adherence**

**Material science knowledge**

LANGUAGES

English

Proficient

Luganda

Upper Intermediate

Lusoga

Intermediate

Swahili

Beginner

PROJECTS

SynF - Real-Time Route Optimization System (Concept)

A conceptual intelligent transportation system focused on real-time vehicle sensing using dynamic traffic data.

The idea explores using vehicle-to-vehicle communication and computation devices to reduce travel time and fuel consumption. Proposed to integrate algorithm-based decision-making and simulation modelling for traffic flow optimization. Focus Areas: Intelligent transport systems, fuel efficiency, real-time optimization, traffic engineering.

Multi-Motor Electric Drive System (Concept)

A conceptual electric propulsion architecture based on multiple distributed motors instead of a single central drive unit.

The project explores torque vectoring, efficiency optimization, and system redundancy for electric mobility and light electric vehicles. Focus Areas: Electric propulsion, motor control concepts, EV powertrains, energy efficiency.

CERTIFICATIONS

CSWA

Mechanical Design

CSWA

Additive Manufacturing

CSWA

Sustainable Design

CSWA

Electrical Design

CAREER GOALS

To work in Research and Development (R&D) within the fields of automotive engineering, power systems, and advanced propulsion technologies, focusing on the design, optimization, and innovation of modern energy and mobility systems.