



SAMUEL NYINGI KARIUKI

MECHANICAL ENGINEER

CONTACT

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EDUCATION

2019 - 2024

JKUAT MAIN CAMPUS JUJA

- BSc. Mechanical Engineering

2015 - 2018

MACHAKOS SCHOOL

- Kenya Certificate of Secondary Education (A-)

SOFT SKILLS

- Project Management
- Public Relations
- Teamwork
- Time Management
- Leadership
- Effective Communication
- Critical Thinking

LANGUAGES

- English (Fluent)
- German (Basics)
- Swahili (Fluent)

ABOUT

I am a dedicated mechanical engineering student with practical experience gained through internships and training in both local and international settings. Skilled in 3D printing, additive manufacturing with bio-based materials, and machine maintenance, I have contributed to research in paste extrusion at TU Bergakademie Freiberg, Germany, and performed maintenance and installation tasks at Capwell Industries, Kenya. With strong leadership, critical thinking, and emotional intelligence, I am passionate about innovative engineering solutions that drive sustainable practices.

CAREER OBJECTIVE

To become a competent professional in the field of mechanical engineering while rendering services with passion and diligently to the best of my ability.

WORK EXPERIENCE

JKUAT Main Campus, IPIC Labs

JULY 2022 TO DATE

A Researcher/assistant in the laboratories with emphasis in:

- 3D Printing
- Point cloud data acquisition using 3D scanning
- 3D filament and thin film extrusion
- Assistant trainer in the rapid prototyping lab

Skills obtained

- Product design and Development through reverse engineering
- Research and innovation
- Communication skills

Technische Universität Bergakademie Freiberg, FEB-APRIL 2024 Germany

Intern in Additive Manufacturing Laboratories

Below are the tasks done:

- Detailed programme of the traineeship period including tasks carried out by the trainee:
- Instruction and training of various equipment used in additive manufacturing processes (binder jetting, liquid deposition modelling, laser sintering, etc.)
- Identify different bio-based materials and binding agents that meet the requirements effective for 3D printing
- Developing CAD models using Solidworks for the purpose of 3D printing
- Printing of test components using one of the learnt 3D printing technologies
- Carry out characterization of the properties of the bio-based materials through various tests and experiments Material preparation methods and powder analysis (sieving, particle size analysis, tap and bulk density, ...)
- Preparing a concise report on the work carried out, results and conclusion of the findings

DIGITAL SKILLS

- MS Packages
- Graphic Design
- Computer Aided Design
- Additive Manufacturing/3D Printing
- 3D Scanning

LEADERSHIP EXPERIENCES

- Class representative Mechanical Engineering (2019-2024)
- Media & Publicity secretary JKUATCU (May-August 2024)
- MOUT Evangelistic Team National Vice Chair (2023-2025)
- MOUT JKUAT ET Chairperson (2022-2023)
- JKUATCU Asst Sound Director, Technical (2022)
- Machakos School House Overseer under KSCF (2017-2018)
- Machakos Dinning Hall Asst Captain

REFERENCES

Dr. James Mutua

Lecturer JKUAT Main Campus

Team leader MAMRet

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Dr. Joshua K. Ngoret, Ph.D.,

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Capwell Industries Ltd

JAN-APRIL 2023

Attachee in the Engineering Maintenance department

- Corrective maintenance
- Preventive maintenance
- Predictive [temperature, vibration, power consumption etc]
- Zero hour/Overhaul maintenance
- Periodical /time based [visual, inspection, cleaning, lubrication etc]
- Hired as an engineer in construction of storage silos

JKUAT Engineering Workshops

FEB-APRIL 2024

Attachee in the Engineering Workshops

- During my attachment, I gained valuable experience in design using various software, which improved my CAD skills. I also acquired hands-on experience in foundry work, masonry, machining in the machine shop, and understanding fitting and foundry workshop operations. This attachment greatly enhanced my practical knowledge and skills in mechanical engineering and manufacturing processes.

TRAINING & CERTIFICATIONS

SES Tech Week Sustainability Project Competition

OCT 2024

Participated in the SES JKUAT Tech Week competitions, where our team emerged as the winners. The competition focused on addressing the Sustainable Development Goals (SDGs), and our project was recognized for its sustainability and financial viability.

WORLD ENGINEERING HACKATHON 2024

2024

Participated in the World Engineering Day Hackathon 2024, where our team submitted a project addressing multiple Sustainable Development Goals (SDGs).

CSR Activity with TIMKEN

22/09/2023

Active participation in a tree planting activity at the Ngong Road Forest Sanctuary organised by the Timken Company

SPECIALIZED WELDING TRAINING COURSE

FEB-MARCH 2024

Participate and completed international training course on Laser Beam Welding and Friction Stir Welding of Ferrous and Non-Ferrous Alloys by Prof. Abdel-Monem El-Batahgy, CMRDI-EGYPT held on 28th Feb to 10th March 2023, JKUAT- Juja Main Campus

FIRST KENYAN-GERMAN SUSTAIN-AM SCHOOL

JAN 2023

- The following topics were covered:
- lectures on Additive Manufacturing (AM)
- lectures and training on processing and preparing local bio-based materials for AM
- lectures on design guidelines for AM and training on Solidworks CAD system
- training on 3D printing (FFF) including model slicing with Ultimaker Cura
- lecture and training on Design of Experiments
- training on giving scientific presentations