JOAN THOITHI

MECHATRONIC ENGINEERING STUDENT

CONTACTS

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✉ thoithimumbi.me@gmail.com

SOCIAL MEDIA

🌐 [HANDLES](#)

PROFILE

I am a Mechatronic Engineering student with a growing focus on embedded systems, control engineering, and digital hardware design. Through academic and hands-on projects, I have gained practical experience in firmware development, PCB layout, FPGA/HDL, and Linux-based workflows. I enjoy working at the intersection of hardware and software, particularly when designing systems that operate close to real-world and performance constraints. My interests include wireless systems, system security, and performance-oriented engineering, with an emphasis on building reliable, scalable solutions.

EDUCATION

2022-2027
DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY
- Bachelor of Science in Mechatronic Engineering

2018-2021
LIMURU GIRLS' SCHOOL
- Kenya Certificate of Secondary Education (K.C.S.E)
- Grade: A-(minus)

WORK EXPERIENCE

◼ **JANUARY - MARCH (2025)**

KENYA POWER AND LIGHTING COMPANY (KPLC), NYERI
Mechatronic Engineer Intern

- Performed inspection and maintenance of substation equipment including transformers, switchgear, CTs/VTs, and auxiliary systems.
- Executed relay testing, control wiring checks, and assisted in fault diagnosis and system restoration.
- Implemented protection schemes including overcurrent, earth fault, and auto-reclosure under supervision.
- Designed, wired, and tested a three-phase electrical oven, including load calculations, heating element selection, thermostatic control, protection devices, and commissioning.

PROJECTS

Selected Projects and Detailed Documentation

Portfolio Website - *Embedded Systems, Hardware and System Level Engineering Projects*

[PORTFOLIO WEBSITE](#)

SKILLS

Technical Skills
- Embedded Programming (C/C++ bare metal)
- PCB Design and Hardware Prototyping
- Digital Hardware and FPGA Design
- Embedded Linux and Systems Engineering
- Control Systems and Robotics Foundation
- Wireless Systems and Basic Security Principles

Tools and Platforms
- KiCAD, Proteus
- Linux, Git
- Solidworks, FreeCAD
- STM32, AVR

Soft Skills
- Problem Solving
- Communication - Fluent in English and KIswahili
- Team Collaboration
- Time Management
- Adaptability