

PISON MUTABRURA CURRICULUM VITAE (CV)

A) Brief Resume

An academically driven Electrical Engineer and Assistant Lecturer with expertise in computer vision, machine learning, embedded systems, power systems, renewable energy, and Internet of Things (IoT). Experienced in teaching undergraduate courses, conducting applied research, and deploying deep learning models on embedded platforms. Strong background in YOLO-based object detection, power system design, and academic research dissemination.

B) Extended Resume

1. Personal Information

1.1 Name, Nationality, Date & Place of Birth

- Name: Pison Mutabarura
- Nationality: Ugandan
- Date of Birth: 4 March 1996

English, Kiswahili, Runyankole, Luganda

1.2 Languages Spoken

1.3 Current Employer Title/Designation & Position

Assistant Lecturer, Department of Electrical Engineering and Automation, Muni University

1.4 Academic Professional Specialization

Electrical and Computer Engineering

1.5 Previous Employer

Multi-Konsults Limited; Cobblestone Energy

1.6 Present Contact Address

- Phone: +256785614368
- Email: p.mutabarura@muni.ac.ug/mutapiso@gmail.com

1.7 Professional Research Identity

- Google Scholar: <https://scholar.google.com/citations?hl=en&user=kwIt3vwAAAAJ>
- ORCID: <https://orcid.org/0000-0003-0984-7366>
- ResearchGate: <https://www.researchgate.net/profile/Pison-Mutabarura-2>
- Academia.edu: <https://muni-ug.academia.edu/PisonMutabarura>
- LinkedIn: [linkedin.com/in/pison-mutabarura-6085ba182](https://www.linkedin.com/in/pison-mutabarura-6085ba182)

2. Academic Growth and Professional Qualifications

2.1 Academic Growth (Certificated)

- MSc Electrical Engineering (Computer Engineering Option), PAUSTI, 2025
- BSc Electrical Engineering, Makerere University, 2021 (First Class)
- Uganda Advanced Certificate of Education (UACE)
- Plus Two High School (2014–2015) – 20/20 points
- Uganda Certificate of Education (UCE)
- Plus Two High School (2010–2013) – Grade 1

2.2 Other Qualifications (Non-certificated)

- Electrical Power Systems Design (LV & MV)
- Lighting and Small Power Design
- Embedded AI deployment on NVIDIA Jetson platforms

3. Professional Experiences

3.1 Teaching Experiences

- Assistant Lecturer, Electrical Engineering and Automation
- Muni University (June 2025 – Present)

3.2 Field Experiences

- Research Administration Assistant, Cobblestone Energy (September 2022– April, 2023)
- Assistant Electrical Engineer, Multi-Konsults Limited (January 2021– April 2023)
- Trainee Engineer, Rural Electrification Agency (2019)

3.3 Research Experiences

3.3.1 Ongoing Research Endeavors

- Deep learning-based real-time object detection for African road environments
- Embedded AI optimization for edge devices

3.4 Outreach Activities

3.4.1 Consultancy Records

- Electrical design consultancy for residential and institutional projects
- Electrical audit and remedial works consultancy

3.4.2 Community Engagement Records

- Technical support for rural electrification initiatives

4. Publications

4.1 Referred Journal Publications

- Mutabarura, P., Muchuka, N., & Segera, D. (2025). Comparative Evaluation of YOLO Models on an African Road Obstacles Dataset for Real-Time Obstacle Detection. Engineering, Technology & Applied Science Research.
- Kalyankolo, U., Nafuna, R., Mugabe, R., Nansukusa, Y., Asikuru, S., Ochima, N., Mutabarura, P., Kalyankolo, Z. (2025). Fuzzy-PID control design and performance analysis for PMSM drives in electric vehicles. Journal of Engineering, Technology, and Applied Science (JETAS), 7(3), 127-148.
- Umaru, K., Salim, K., Asikuru, S., Ochima, N., Mutabarura, P., Nansukusa, Y., & Ritah, N. (2026). Performance Optimisation of Hybrid Renewable Systems for Remote Off-Grid Electrification. International Journal of Recent Technology and Applied Science (IJORTAS), 8(1), 25-41.
- Mutabarura, P., Muchuka, N. M., & Segera, D. R. (2026). Real-Time Road Obstacle Detection System to Enhance Road Safety on African Roads. Engineering Reports, 8(6), e70905.

4.2 Thesis

- MSc Thesis: Design and Implementation of a Real-Time Vehicle Collision Avoidance System Based on a YOLOv3 Model Optimized for Resource-Constrained Edge Devices.
- BSc Dissertation: Mutabarura, P. (2020). Design and implementation of an automatic power switch for a grid-solar hybrid system with power surge protection (BSc dissertation).

5. Academic Activities

- Curriculum development support
- Laboratory coordination support

6. Services to the Local and National Communities

- Electrical consultancy and audits
- Technical training and mentorship

7. Memberships to the Professional Bodies & Academic Affiliations

- Member, Makerere Engineering Society
- Graduate Member, Uganda Institute of Professional Engineers (UIPE)

8. Special Interests

- Embedded AI systems
- Renewable energy technologies
- Smart power systems

9. Hobbies

- Reading technical literature
- Coding and prototyping
- Academic writing

10. Referees

1. Dr. Edwin Mugume – Senior Lecturer, Department of Electrical and Computer Engineering, Makerere University (Edwin.mugume@mak.ac.ug / +256 784031622)
 2. Dr. Nicasio Maguu Muchuka – Lecturer, Department of Electrical & Control Engineering, Egerton University (nmuchuka@egerton.ac.ke /+254 738330523)
 3. Eng. Vicent Okwija – Quality Control Manager, Multi-Konsults Limited (okwija@yahoo.com /+256 772618463)
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