

GEORGE MACHARIA

Personal Information

- **Nationality:** Kenyan
- **Date of Birth:** September 03, 2003
- **University:** Meru University of Science and Technology
- **Current Degree:** Bachelor of Technology in Electrical and Electronics Engineering
- **Specialization:** Telecommunications Engineering
- **Expected Graduation:** October 2026
- **Professional Email:** georgemacharia@students.must.ac.ke
- **Personal Email:** mashgeorge254@gmail.com
- **Phone Number:** +254 797 233 865
- **LinkedIn:** <http://www.linkedin.com/in/george-macharia-b27835301>

Educational Background

Bachelor of Technology in Electrical and Electronics Engineering

- **Institution:** Meru University of Science and Technology
- **Major:** Telecommunications Engineering
- **Relevant Coursework:**
 - Telecommunications Systems
 - Digital Signal Processing
 - Network Communications
 - Microwave Engineering
 - Antenna Design
 - Wireless Communication Technologies

High School Education

- **Institution:** Nyahururu High School
- **Location:** Nyandarua County
- **Key Achievements:**
 - Excelled in Physics

- Developed initial passion for engineering
- Demonstrated strong academic performance

Primary School Education

- **Institution:** Exodus Academy Lanet
- **Location:** Nakuru County
- **Completed Primary Education**

Academic Achievements

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Professional Development and Mentorship

Mentorship Programs and Seminars

- **Safaricom Decode 3.0 Seminar**
 - Physical Participation
 - In-person technology and innovation insights
- **Institute of Engineers of Kenya (IEK) Mentorship Week**
 - Virtual Participation
 - Certificate of Participation, 2025
 - Online professional engineering development
- **Royal Academy of Engineering Mentorship**
 - Physical Participation
 - On-site mentorship sessions
 - Received Participatory Certificate
 - Commemorative T-shirt as participant token

Technical Skills

- **Telecommunications Focused:**
 - Network Design and Analysis
 - Signal Processing
 - Communication Protocol Understanding
 - RF Circuit Design
- **Programming Languages:**

- MATLAB: Intermediate Level
- Python: Beginner Level
- C++: Intermediate Level
- **Simulation Tools:**
 - SIMULINK: Advanced Level
- **Design Tools:**
 - AutoCAD: Intermediate Level
 - PCB Design Software: KiCad (Beginner Level)
- **Laboratory Skills:**
 - Telecommunications Equipment Handling
 - Signal Measurement and Analysis
 - Network Configuration
 - Prototype Development

Leadership Experience

Class Representative

- **Institution:** Meru University of Science and Technology
- **Department:** Electrical and Electronics Engineering
- **Responsibilities:**
 - Serve as primary communication bridge between students and faculty
 - Represent student interests in departmental meetings
 - Coordinate academic and extracurricular activities
 - Facilitate effective communication and problem-solving within the cohort

Research and Project Experience

Undergraduate Research Project

- **Project Title:** Smart Shopping Trolley
- **Supervisor:** Electrical Lab Technician
- **Duration:** Ongoing (Expected Completion by Mid-April)
- **Project Description:** Developing an autonomous shopping trolley that follows clients during shopping in a mall

- **Key Achievements:**

- Enhanced understanding of sensor technologies (Ultrasonic and Infrared sensors)
- Developed Arduino coding skills
- Learned ESP32 microcontroller programming

- **Methodology:**

- Designing a shopping trolley structure embedded with:
 - Motors
 - Sensors
 - Receivers
 - Programmed ESP32 microcontroller

- **Potential Impact:**

- Enables independent shopping for disabled clients
- Improves shopping experience through technological innovation

Internship/Industrial Experience

Internal Attachment

- **Location:** Meru University of Science and Technology
- **Duration:** May 1st to July 26th
- **Key Responsibilities:**
 - Assisted in departmental technical operations
 - Gained hands-on experience in engineering laboratory settings
 - Supported ongoing research and technical projects
 - Assisted in the installation and maintenance of telecommunication equipment
 - Conducted signal testing and troubleshooting

Extracurricular Activities

University Technical Clubs

- **Organization:** Robotics club
- **Position:** Member
- **Activities:**
 - Participated in technical workshops

- Attended overnight hack-nights to improve on coding skills
- Attended student technical seminars

Language Skills

- **English:** Fluent
- **Swahili:** Fluent

Certifications

- Certificate of Participation, Institute of Engineers of Kenya (IEK) Mentorship Week, 2025
- Participatory Certificate, Royal Academy of Engineering Mentorship

Professional References

Meru University of Science and Technology

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