IAN MUTUTU KIILU

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**PROFESSIONAL SUMMARY**

Applied Optics and Lasers Technology graduate skilled in GIS, Remote Sensing, and terrain analysis using ArcGIS and QGIS. Experienced in GPS/GNSS mapping, spatial data management, and cartography for operations defense applications. Committed to accuracy, discipline, and innovation in enhancing national security through geospatial intelligence.

**CORE COMPETENCIES**

* Experienced in terrain modeling, DEM analysis, and line-of-sight mapping.
* Skilled in GPS/GNSS field data collection, geodatabase management, and data validation.
* Proficient in GIS and Remote Sensing using ArcGIS and QGIS for mapping and spatial analysis.
* LiDAR Systems and UAV Mapping.
* Data Analysis and Visualization.
* Database Management Systems.
* SQL systems.
* Experienced in cartography, map design, and topographic data visualization.

**TECHNICAL SKILLS**

* Python for GIS (ArcPy, QGIS & API) Automate map creation and data processing.
* Knowledge of photogrammetry and georeferencing.
* Trained in secure handling of classified geospatial data.
* Laser Safety and Operation.
* First Aid and Emergency Response fit.

**EXPERIENCE**

Ophthalmic Technician Intern, Kiambu Level 4 Hospital (May-August 2024)

* Assisted in patient vision assessments, laser diagnostics, and clinical documentation
* Applied optical instrumentation skills in medical diagnostics
* Completed First Aid and Emergency Response training.

Volunteer, Miale Children’s Home, under Multimedia University of Kenya Optical Society (Dec-Feb 2024)

* Supported child care routines, organized educational and recreational activities.
* Demonstrated teamwork, reliability, and adaptability in outreach programs.

**PROJECTS/ ACHIEVEMENTS .**

Application of Li-DAR Technology in Monitoring Human Traffic for Physical Security Systems (Final Year Project)

* Integrated sensors and optical systems for real-time motion analysis (TF-Mini LiDAR and LD2410 radar sensors)
* Designed system architecture with potential for AI-assisted threat classification and autonomous detection

**EDUCATION**

**Bachelor of Science, Applied Optics and Lasers Technology**

Multimedia University of Kenya (2019-2024)

Graduated: November 2024

**Kenya Certificate of Secondary Education (KCSE)**

St. Joseph Boys High School (2015-2018)

Grade: C+ (52 points)

**Kenya Certificate of Primary Education (KCPE)**

Kahuho Primary School (2007-2014)

Score: 355 marks

**CERTIFICATIONS & TRAINING**

* Laser Safety Management Operation, Multimedia University of Kenya | 2022.
* First Aid and Emergency Response, Kiambu Level 5 Hospital | 2024.
* Advance Diploma in Geographic Information Systems, Allison (online course) | 2025.
* SQL for spatial data, Coursera (Online) | 2025.
* Cartography, Ersi Academy (Online) | 2025.

**PROFESSIONAL INTERESTS**

* Exploring innovations in AI and machine learning integration within GIS for predictive analysis.
* Developing advanced skills in remote sensing, LiDAR, and UAV mapping technologies.
* Building capacity in geospatial database management and secure data handling for defence systems.
* Fibre Optics Drones.

**REFEREES**

Available on request.