

Eugene Kuloba

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PROFESSIONAL PROFILE

Data Scientist with a strong foundation in meteorology and over two years of specialized experience in geospatial data management, environmental analysis, and conservation technology coordination. Proven track record managing spatial databases, deploying and maintaining EarthRanger workflows, and coordinating multi-stakeholder grants including a Smithsonian/NASA census project. Skilled at translating complex datasets into actionable insights and delivering capacity-building programs for field teams.

TECHNICAL SKILLS

- Programming & Analysis: Python, R, SQL
- GIS & Remote Sensing: ArcGIS Pro, QGIS, EcoScope
- Databases & Cloud: PostgreSQL/PostGIS, SQLite, Dropbox; Conda & pip environment management; Git & GitHub
- Environment & Monitoring: NetCDF/GRIB handling, GEE
- Visualization & Reporting: Matplotlib, Folium, Leaflet, Tableau, PowerPoint
- Capacity Building & Support: EarthRanger Mobile protocol design, technical troubleshooting, workshop facilitation, grant coordination

PROFESSIONAL EXPERIENCE**Geospatial Data Manager & NASA Data Coordinator****Mara Elephant Project (MEP), Maasai Mara, Kenya | January 2024 – Present**

- Managed MEP's Landscape Dynamics spatial database and led a geospatial field team to collect, curate, and QA/QC distance-based ground transect data.
- Developed and maintained standardized EarthRanger Mobile data-collection protocols for distance-based ground surveys across conservancies.
- Served as primary technical liaison for conservancies: provide troubleshooting support for EarthRanger Mobile, resolve field application issues, and liaise with teams to ensure timely form completion.
- Coordinated Smithsonian/NASA census grant: curated ground-count datasets, tracked project progress (patrol count, transect length, species tallies), and delivered monthly written summaries at virtual coordination meetings; submitted post-census reports to Smithsonian.
- Digitized and cartographed unmapped roads and fences; automated LandDx data syncing, cleaning, and updates; produce ecosystem-wide maps.
- Designed and implemented LandDx data quality checks, backup procedures, and report outputs; update and replicate the Greater Mara Basemap as required.

GIS & Data Analyst (Intern)

National Drought Management Authority, Nairobi, Kenya | August 2021 – April 2022

- Processed NDVI and VCI temporal datasets to produce drought early-warning maps; delivered county-level briefs influencing regional policy.
- Assisted in survey form design using KoboToolbox with multimedia and repeat groups for AMR intervention assessments.

GIS & Data Analyst (Intern)

Kenya Meteorological Department, Nairobi, Kenya | July 2021 – August 2021

- Applied fundamentals of Numerical Weather Prediction (NWP) systems to support forecast analysis.
- Executed Weather Research and Forecasting (WRF) model runs within a Linux environment using shell commands.
- Developed automation routines for data processing and model setup through Linux scripting.
- Analyzed model outputs using R to derive actionable insights for meteorological reporting.

KEY PROJECTS

Smithsonian/NASA Distance Count Grant Coordination

- Led data coordination for a Smithsonian/NASA 4-year grant, including ground-count data curation, protocol development, and monthly reporting for distance-based transect surveys.
- Developed dashboards to monitor project KPIs: patrol count, transect length, and species tallies, streamlining virtual coordination meetings.

Training-of-Trainers (TOT) Grant: Ranger Capacity Building

- Contributed to a Training-of-Trainers (TOT) grant secured by MEP: designed curriculum and delivered ongoing workshops on Basic IT and EarthRanger workflows for rangers, enhancing field-team technical capacity.

GDA Grant: EarthRanger Deployment

- Contributed to an MEP-secured GDA grant by deploying EarthRanger across conservancies in the Mara; configured spatial databases, feature services, and user permissions.
- Trained 50+ rangers and managers on patrol tracking, data entry, mapping, and report generation.

Derma AI: Skin Disease Classification

- Co-developed a CNN classifier (VGG-19, EfficientNet) for skin condition diagnosis; deployed via Flask for end-user evaluation.

EDUCATION

1. Bachelor of Science in Meteorology| Second Class Upper Division, University of Nairobi, Kenya, (2019 - 2023)
2. Nanodegree, Data Science
Moringa School, Kenya, (2022 - 2023)

REFERENCES

1. Dr. Jake Wall
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2. Dr. Jared A. Stabach
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