MICHAEL OCHIENG

GIS ANALYST

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PROFESSIONAL SUMMARY

GIS Analyst with 3 years of focused experience spanning transportation planning, spatial analysis, and advanced cartographic visualization across the East African region. Currently preparing to pursue a Master of Science in GIS and Remote Sensing, bringing a strong academic drive to bridge practical geospatial workflows with advanced spatial research.

Demonstrated expertise in transforming complex spatial datasets into actionable intelligence using ArcGIS Pro, QGIS, spatial Python, and the Adobe Suite. Proven track record of delivering high-stakes projects from initial data collection to final visual presentation, including leading critical spatial mapping for road crash blackspots to develop targeted safety countermeasures, and mapping trade and transport facilitation along Kenya's coastal corridor to identify operational bottlenecks and growth gaps, and participating in street revitalization project competitions focused on revitalizing industrial areas in Nairobi.

Technical proficiency encompasses industry-standard GIS software, emerging spatial programming and web mapping tools, and professional graphic design platforms for tailored project deliverables. Registered and grounded in attention to detail and strict time management, bringing a high standard of precision and reliability to every project phase.

A unique combination of technical GIS execution and strategic transport planning acumen, evidenced through hands-on work addressing public safety and regional logistics. Proven ability to translate complex spatial insights into clear, decision-ready visuals that empower stakeholders to make informed, impactful infrastructure choices.

CORE COMPETENCIES

- **GIS Software & Web Mapping:** ArcGIS Pro, QGIS, ArcGIS Online, Leaflet, Google Earth Pro
- **Spatial Methodologies & Analysis:** iRAP Crash Risk Mapping, Network Analysis, Hotspot & Cluster Analysis
- **Transportation & Traffic Planning:** Traffic Simulation (TransCAD, SUMO), Road Safety Engineering, Corridor & Logistics Analysis
- **Data Analytics & Visualization:** Advanced Cartographic Design, Adobe Suite (Illustrator, Photoshop, InDesign), Microsoft Excel (Data Analytics & Modeling)
- **Project Domains:** Road Crash Blackspot Mapping, Urban Street Revitalization, Trade & Transport Corridor Analysis, Spatial Infrastructure Planning

TECHNICAL SKILLS

GIS & Spatial Analysis Certifications

- Professional Certificate in GIS for Transportation Planning – London School of International Business, 2025
- Spatial Data Science: The New Frontier in Analytics – Esri, 2025
- GIS Applications in Climate Action – Esri, 2023
- Cartography Training Certification – Esri, 2023

Road Safety & Transportation Training

- EBRD Road Safety Engineering E-Learning Training Course – European Bank for Reconstruction and Development (EBRD), 2026
- Road Safety Training – TIMCON Associates & International Road Federation (IRF), 2025
- Starting Your Crash Analysis Studio – Strong Towns, 2026
- Integrated Transport Planning E-Course – World Bank, 2026
- Introduction to Road Safety – TIMCON, 2026

Research, Methodologies & Professional Memberships

- Managing Effective Field Research – World Bank, 2025
- Graduate Member – Kenya Institute of Planners (KIP)

WORK EXPERIENCE

GIS Analyst & Transportation Planner | TIMCON Transport LTD | Nairobi, Kenya **Oct 2024 – Present**

- Conduct advanced spatial analysis to inform critical transport planning decisions, including accessibility mapping, route optimization, and infrastructure gap assessment.
- Perform desktop research and integrate spatial data with planning and modeling tools to support the design of sustainable, inclusive, and efficient transport networks.
- Design clear, data-driven maps and visualizations to support strategic planning, stakeholder engagement, and policy formulation.

Junior Urban Designer | Independent / Project-Based| Nairobi, Kenya **April 2024 – Sept 2024**

Spatial Modeling of Informal Settlements (Tambach, Nakuru County & Jiw Dendi, Awendo, Migori County):

- Developed detailed 3D spatial models of informal settlements using SketchUp, focusing on enhancing the visualization and analysis of local land use development plans.
- Collaborated with local stakeholders to interpret planning data and translate it into clear, accessible visual representations, informing decision-making in urban upgrade and regularization initiatives.

Bus Shelter Design Competition Finalist (Kenya Urban Roads Authority - KURA / Dunga Road Industrial Area, Nairobi):

- Developed a comprehensive design proposal for bus shelters along Dunga Road in the Nairobi Industrial Area, integrating commuter flow dynamics, safety considerations, and environmental responsiveness.
- Applied user-centered design principles and urban transport planning standards to enhance commuter comfort, visibility, and shelter functionality in high-demand transit zones.
- Contributed to strategic urban mobility goals by proposing modular, cost-effective, and scalable public transit infrastructure designs.

VOLUNTEER EXPERIENCE

Volunteer Teacher | Dr. Mbai Mixed Secondary School | *Homa Bay County, Kenya* **Jan 2019 – June2019**

- Developed and delivered educational content for secondary school students, preparing comprehensive learning materials and lesson plans.
- Conducted student assessments and evaluations, marking examinations and providing constructive feedback to support academic progress.
- Organized and supervised student examinations, ensuring proper administration and maintaining academic integrity standards.
- Coordinated extracurricular activities, fostering student engagement and community building within the school environment.

Community Capacity Building Volunteer | Trees for the Future| *Homa Bay County, Kenya* **2022**

- Completed specialized training in climate change mitigation strategies, sustainable agriculture, and community empowerment.
- Engaged in community capacity building focused on adaptive farming practices, kitchen garden preparation, and sustainable livestock management.

EDUCATION

Bachelor's Degree | Bachelor of Built Environment in Urban Design & Development (Second Class Honors, Upper Division) | Technical University of Kenya July 2019 – Dec 2023

Certificate Of Secondary Education | Kenya Certificate of Secondary Education | St. Joseph Rapogi Secondary School Feb 2015 – Nov 2018

PROJECTS PORTFOLIO

Traffic Data Collection for the Nairobi–Malaba (A104) Upgrading Project | Kenya *(October 2024)*

- **Scope:** Comprehensive highway traffic data collection across a 400+ km stretch of Kenya's Northern Corridor.
- **Key Contributions:** Conducted classified traffic counts, Origin–Destination (OD) surveys, Non-Motorized Transport (NMT) surveys, and Willingness-to-Pay (WTP) assessments. Handled GPS/GIS mapping of survey locations, spatial data management, and provided critical support for traffic demand forecasting, transportation planning, and corridor analysis.

Consultancy Services for KeNHA Road Safety Audit and Capacity Building | Kenya *(2024 – Present)*

- **Role:** GIS Analyst
- **Scope:** Carrying out road safety assessments and capacity building across selected key road corridors for the Kenya National Highways Authority (KeNHA).
- **Key Contributions:** Identified High Collision Locations (HCLs) and analyzed contributory engineering and non-engineering factors. Contributed to recommending mitigation measures, packaging improvements into implementable lots, supporting capacity-building initiatives for KeNHA staff, and publishing road safety documents for authority-wide usability.

Consultancy Services for Trade and Transport Facilitation Study for Multinational Bagamoyo Horohoro/Lunga-Lunga – Malindi Corridor *(Jan 2025 – Present)*

- **Role:** GIS Analyst
- **Scope:** Identifying trade development constraints, growth gaps, and transport bottlenecks along the East African Coastal Corridor Route.
- **Key Contributions:** Assessed freight traffic flows, trade volumes, transit times, and commodity transport costs along the corridor. Evaluated the impact of Non-Tariff Barriers (NTBs) and road infrastructure quality to formulate strategic recommendations for improving regional trade and transit facilitation.

Consultancy Services for the Establishment of a Road Safety Unit at Kampala Capital City Authority (KCCA) | Uganda *(2024 – Present)*

- **Role:** GIS Analyst
- **Scope:** Establishing a self-sustaining Road Safety Unit within the Directorate of Engineering and Technical Services at KCCA.
- **Key Contributions:** Processed traffic and traffic crash data, executed road safety screenings and blackspot identification, and assisted in developing comprehensive road safety strategies and actionable implementation plans.

Consultancy Services for Road Safety Audit Management in Kenya under Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) | Kenya

- **Scope:** National-level road safety audit program management and international donor coordination.
- **Key Contributions:** Supported safety improvement implementations and data-driven accident reduction initiatives aligned with global best practices.