

CURRICULUM VITAE

ZACHARY NYABAYO

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Career Objective

Devoted and skilled urban planner with a solid foundation in community development, land-use integration, urban design, and geographic information systems (GIS). Data-driven and passionate about sustainable development, I am eager to leverage my expertise to make a significant impact at a forward-thinking institution.

Summary of Qualifications

- Proficient in the use of Geographic Information Science (GIS) for data-driven decision-making.
- Strong knowledge of urban design, transportation, and land-use integration.
- Excellent research and data analysis skills.
- Member of the Kenya Institute of Planners (KIP).

Education

UAVs in Precision Agriculture

Geoversity, University of Twente, March 2025 – April 2025

GIS for Climate Action

Esri, Feb 2025 – April 2025

Going places with Spatial Analysis

Esri, Jan 2025 - March 2025

Cartography

Esri, April 2024 - May 2024

Bachelor of Arts in Urban & Regional Planning with IT

Maseno University, 2019-2023

Cities and climate change

UN CC:Learn, August 2022 – September 2022

Geospatial Information Technology (GIT) in Fragile contexts

United Nations Institute for Training and Research, July 2022- September 2022

Kenya Certificate of Secondary Education (KCSE)

Koderobara Boys High School, 2015-2018

Experience

Jan2025- Feb 2025

Position: Research Assistant

Organization: Ler Consult Ltd

Supervisor: Maureen Muma

Narrative Description of Project

Physical Planning, Cadastral Survey, and Detailed Topographical Survey of 4 Selected Informal Settlements in Nakuru County (Phase IIC – Cluster 3)

Responsibilities

- Survey designing in KoboToolbox/ODK (online data collection platform).
- Administered household questionnaires.
- Conducted Key Informant Interviews
- Field photography & Minute writing
- Data cleaning and Analysis.
- Conducted /led community stakeholder forums
- Formulated Plan proposals and prepared draft plans for various informal settlements.

April 2024- April 2025

Position: Assistant Urban Planner/ Urban designer

Organization: Nakuplan Consultants Ltd

Supervisor: Plan James Michoma, Plan Joakim Nyarangi

Narrative Description of Project

Planning, surveying and demarcation of 37 market centers for the county government of Kisii.

Responsibilities

- Developed a digitized up-to-date GIS database for the various Market centers, as well as their socio-economic, environmental, and structural profiles.
- Collaborative interpretation of satellite imagery.
- Prepared digital topographical, thematic, basemaps and issue maps.
- Produced high-quality study area and baseline GIS map products using desktop GIS software (e.g. ArcGIS Pro) for the project.
- Provided GPS and other geospatial data collection tool services to support the project.
- Georeferenced Property Identification Documents (PIDs) and various survey maps for different market centers.
- Identified spatial-temporal variations of the different market centers.
- Quality control of all collected GIS data.
- Prepared plot layout plans and land use scheme plans for various market centers.

June 2023 – March 2025

Position: Geographic Information Systems (GIS) specialist

Organization: Elena Consultants LTD

Supervisor: Mr. Severiano Odhiambo, Senior Physical Planner, Elena Consultants LTD

Narrative Description of Project

Preparation of Local Physical and Land Use Development Plan (LPLDP) of Kamukuywa and Myanga urban areas.

Responsibilities

- Georeferenced Property Identification Documents (PIDs) and various survey maps for the different urban areas (Kamukuywa and Myanga)
- Developed a digitized up-to-date GIS database for the two Urban areas, as well as their socio-economic, environmental and structural profiles and prepared digital topographical, thematic, and issue maps.
- Mapped climate vulnerability zones (e.g., flood-prone or erosion-prone areas).
- Identified and visualized areas suitable for green infrastructure development.
- Analyzed climate data trends to inform adaptive urban planning strategies.
- Conducted GIS-based land suitability analysis to balance urban development with environmental conservation.
- Mapped existing natural resources and proposing zones for their protection or sustainable use.
- Identified optimal locations for renewable energy infrastructure
- Created spatial data layers for land use zoning and infrastructure planning.

Feb 2023 – March 2023

Position: Assistant Physical Planner & GIS Expert

Organization: Maseno School

Narrative Description of Project

Preparation of the Maseno School Master Plan for the period 2023-2053.

Responsibilities

- Conducted feasibility studies to assess the practicality of the proposed plan.
- Engaged with stakeholders to gather input and insights.
- Data collection and analysis.
- Facilitated the visioning process to shape the future of Maseno School.
- Made technical presentations to convey the plan's details and benefits.
- Developed visual materials (maps, models, renderings) of proposed green infrastructure.
- Proposed interventions for beautification.
- Formulated landscape design guidelines.
- Formulating plan proposals to guide the development of the institution.
- 3D Rendering & walkthrough video.

Feb 2023 – Dec 2023

Position: Co-Researcher

Organization: Maseno University, Slum Dwellers International (SDI) & The County Government of Kisumu

Supervisor: Mr. Severiano Odhiambo

Narrative Description of Project

Conducting Climate Change Vulnerability Mapping and Adaptation Planning in Selected Administrative Wards in Kisumu County. (7 wards)

Responsibilities

- Identified potential hazards and threats related to climate change.
- Collaborative interpretation of satellite imagery during community asset mapping.
- Mapped areas affected by these hazards and threats including critical transport assets (bridges, major roads, terminals).
- Created Urban Heat Island zone maps and Flood Hazard areas maps.
- Recorded coping and adaptive capacities of the local communities.
- Collected and analyzed data related to climate change impacts.
- Conducted /led Community Participatory GIS and Focus group discussions.
- Evaluated the exposure, sensitivity, and adaptive capacity of existing transport infrastructure
- Created a GIS-based vulnerability map to visualize the data effectively.
- Collaborated in developing green transport solutions like non-motorized transport (NMT) lanes or tree-shaded walkways to reduce heat stress.
- Assisted in the development of a county Atlas to disseminate the research findings.

April 2022 - June 2022

Position: Pro bono participant (Landscape Architect)

Organization: St.Francis Assis Catholic Church ,Mamboleo

Supervisor: Mrs. Peris Teyie, Mr. Severiano Odhiambo

Narrative Description of Project

Preparation of a detailed Master Plan, Strategic Plan, and Environmental Management Plan for St. Francis Assis Catholic Church, Mamboleo covering a period of 5 years.

Responsibilities

- Drafted scaled layouts of proposed green spaces.
- Developed 3D models of selected public spaces. (Grotto place and prayer garden)
- Produce photo-realistic visualizations for stakeholder understanding.
- Defined hardscape, plant species, furniture, lighting elements.
- Initialized layout options for drainage (drainage was the main problem).
- Recommended for walkability, safety, inclusivity in public spaces within the church.
- Drafted the final site layout plan.

Software proficiency

Expert	Advanced
ArcGIS Pro /ArcMap	Sketchup
ArcGIS Storymaps	AutoCAD
ArcGIS Survey123	Survey CTO
ArcGIS CityEngine	ODK
Microsoft Suite	Microsoft Power Bi
Kobo toolbox	QGIS
Lumion	ArcGIS Field maps
Chief architect	ArcGIS Dashboards
Universal Map downloader	ArcGIS InstantApps

Professional Skills	
<ul style="list-style-type: none"> • Geographic Information Science (GIS) • Data Collection and Analysis • Urban Design • Land-Use Integration • Transportation Planning 	<ul style="list-style-type: none"> • Sustainability Planning • Research and Analysis • Stakeholder Engagement • Community Development • Landscaping
References	
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