

# THERESA NYATICHI MONARI

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## SKILLS

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**Technical Skills:** ESRI ArcGIS Products | QGIS | AutoCAD Civil 3D | Python | GDAL Library | Pandas | Geopandas | Leafmap | Matplotlib | Folium | Leaflet | Rasterio | Geemap | Xarray | Rioxarray | Whitebox | Maplibre | Google Earth Pro | Git & GitHub | JupyterLab | PostgreSQL | PostGIS | Google Colab | MS Visual Studio | HTML | CSS | Microsoft Office.

**Professional Skills:** Geospatial Data Collection, Analysis, and Visualization (Mapping) | Data analytics | Scientific Research | Accountability | Analytical Thinking | Team Player | Effective Communication | Adaptive and Flexible | Responsible | Trustworthy | Problem-solving | Innovative | Responsive Web Design.

**Tools:** RTK GPS | Total Station | Level.

## WORK EXPERIENCE

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### Geographic Information Systems /Land Surveyor Freelancer

*Feb 2024 – Current*

- Geospatial data collection.
- Cadastral, Topographic, and Engineering surveying.
- Mapping and visualizing using ArcGIS Products, Civil 3D, QGIS software, and Python Programming for interactive web GIS maps.
- Digitization of the old topographic maps using ESRI ArcGIS Products and QGIS.
- Spatial database management using PostgreSQL.
- Spatial Data Analysis and GIS Programming.
- Remote Sensing Imagery analysis and visualization.

### Kenya National Highways Authority (KENHA)

*Nairobi, Kenya*

*Land Surveyor (Attachment)*

*Jan 2023 – Mar 2023*

- Geospatial Data Collection: Road projects fieldwork member, Civil 3D mapping, road reserve marking, levelling, referencing, cadastral surveying, static surveying, and topographic surveying.
- Data visualization using ArcGIS Desktop, Civil 3D, and QGIS software.
- Digitize the old topographic maps using ESRI ArcGIS Products and QGIS.
- Setting out road infrastructure such as footbridges and drainage culverts.
- Providing geospatial information to infrastructure development and maintenance engineers.
- Prepare and present road project reports to my supervisors.

## EDUCATION

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### The Technical University of Kenya, Nairobi, Kenya

*Sep 2018 - Dec 2023*

- Bachelor of Technology in Surveying Technology
- Second Class Honors, Upper Division.
  - **Relevant Coursework:** Engineering Surveying, Topographic Surveying, Geopositioning, Geodesy, Cartography and Map Production, Cadastral Surveying, Geographic Information Science, Remote Sensing, Highway and Transportation Engineering, etc.

## PROJECTS/RESEARCH EXPERIENCE

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### Research Project

*May 2022 – Mar 2023*

- **A GIS Application in Competency-Based Curriculum Schools Distribution Mapping and Proposing Future Secondary Schools Locations: Case Study of Makadara Sub-County.**
- [Project Report Paper](#)
- **Advisor: Mr. Tom Mumo – Department of Geomatics and Land Management, TUK**

- I carried out independent research in GIS in partial fulfillment of my Bachelor's degree.
- I utilized ArcGIS Pro, Microsoft Excel, Word, and PowerPoint for data analysis, project report/results presentation, and visualization.
- I successfully did the oral presentation of the project results to a panel of professors.

## **OTHER COURSES/CERTIFICATIONS**

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- **UNESCO Open Learning:** Flood Hazard and Exposure Mapping *Apr 2025 - Jun 2025*
- **University of Tennessee, Knoxville:** Geographic Software Design: Open Geospatial Solutions by Dr. Qiusheng Wu (GitHub). *Jan 2025 – May 2025*
- **Fundamentals of Remote Sensing:** The NASA Applied Remote Sensing Training (ARSET) Program. *Mar 2025*
- **University of Toronto:** Spatial Analysis and Satellite Imagery in a GIS (Coursera). *Mar 2025*
- **Austin Community College:** GISC 2420 Intermediate GIS. *Jan 2025*
- **Alison:** Diploma in Remote Sensing - A Theoretical Approach (Online). *Feb 2025*
- **University of Tennessee, Knoxville:** Intro to GIS Programming: Open Geospatial Solutions by Dr. Qiusheng Wu (GitHub). *Sep 2024 – Dec 2024*
- **GEO University:** Introduction to Remote Sensing (Online). *Aug 2024*
- **FreeCodeCamp.** Responsive Web Design. *Jun 2024*
- **SheCodes:** SheCodes Basics (HTML/CSS/ JavaScript) *Mar 2024*
- **ESRI MOOC:**
  - Spatial Data Science: The New Frontier in Analytics. *Oct 2024*
  - Make an Impact with Modern Geo Apps. *Oct 2024*
  - Transform AEC Projects with GIS and BIM. *Oct 2022*
  - Imagery in Action. *Jun 2022*
  - Going Places with Spatial Analysis. *May 2022*
  - Getting Started with Data Management. *Mar 2022*
  - Cartography. *Mar 2022*
  - GIS Basics. *Mar 2022*

## **PROFESSIONAL MEMBERSHIP**

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**The Institution of Surveyors of Kenya (ISK)**  
ISK Membership No: 5418

*Aug 2022 - Current*