Accademic CV

MEKONNEN GIDEY MELES

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PROFESSIONAL SUMMARY

Senior Geospatial Lab Instructor and Manager with 5+ years of experience in advanced Data base/GIS/RS architectures. Specializing in automating remote sensing workflows using Python and Google Earth Engine (GEE). Proven track record in mentoring MSc researchers in multi-modal data integration, Computational and Geostastical analysis and geodatabase management.

PROFESSIONAL EXPERIENCE

Senior Lab Instructor & Manager | GDTC Lab, Bahir Dar University (2020 – Present)

- **Teaching & Curriculum Development:** Lead lab instruction for MSc courses: Advanced RS, Geo-Databases, Computational and Geostastical Science and Spatial Programming.
- **Research Mentorship:** Technical lead for 20+ MSc theses, transitioning student projects from manual GIS workflows to automated Python/R-based spatial analysis.
- **System Administration:** Manage high-performance GIS workstations and ERDAS/ArcGIS Enterprise environments.

TECHNICAL SKILLS

- **Programming:** Python (Pandas, Rasterio, PyTorch), R (sf, terra), JavaScript (GEE).
- **Geospatial Engines:** Google Earth Engine, ArcGIS Pro, ERDAS IMAGINE, QGIS.
- **Database Management:** PostGIS, SQL Server, Spatial Indexing, Graph.
- **Advanced RS:** InSAR, LiDAR processing basics, OBIA, Hyperspectral image processing basics.

EDUCATION

- **M.Sc. in Geoinformation Science** (In Progress, expected Dec 2026), Bahir Dar University, Ethiopia.

- **M.Sc. in Information Technology (2021)** – Bahir Dar University, Ethiopia
- **BSc in Computer Science (2016)** – Bahir Dar University, Ethiopia

EDUCATION

M.Sc. in Geoinformation Science (In Progress, Dec 2026)-*Bahir Dar University, Ethiopia*

- **Core Research Focus:** Geospatial AI and Advanced Remote Sensing.
- **Recent Milestone:** Developed an **11-stage Object-Based Image Classification (OBIC) model** using the ERDAS IMAGINE Objective workstation. Calibrated a **Multi-Bayesian Network** using 0.15m high-resolution aerial imagery, achieving a Mean PixProb (Spectral Confidence) of >0.98 for agricultural plot delineation.

M.Sc. in Information Technology (Conferred 2021)-*Bahir Dar University, Ethiopia*

- **GPA:** 3.65/4.0 (Verified **3.6** by WES ICAP evaluation).
- **Thesis:** *A Linked Data (LD) Approach for Publishing and Better Integration of Ethiopian Open Government Datasets (OGD).*
- **Contribution:** Engineered a semantic Ontology framework using RDF/OWL to unify semi-structured statistical data, enabling real-time analytics via a federated SPARQL endpoint.

B.Sc. in Computer Science (Conferred 2016)-*Bahir Dar University, Ethiopia*

- **GPA:** 3.64/4.0 (Verified **3.6** by WES ICAP evaluation).
- **Project:** Developed an interactive Learning Management System (LMS) based on the Open EDX framework to optimize access and student engagement.

PUBLICATIONS

Pandikumar, T., & Gidey, M. (2017). "Data Security in LAN Using Distributed Firewall." *International Research Journal of Engineering and Technology (IRJET)*, 4(5), 867–873.
Configured and tested security protocols for local networks,