

Asmita Karki

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EDUCATION

Master of Science, Environmental Science

The University of West Florida, Pensacola, FL

Anticipated- Aug 2026

Courses: Fundamental of GIS| Weather and Climate| Environmental Science, Politics and Policy| Remote Sensing

Bachelor of Science, Geomatics Engineering

Tribhuvan University, Pokhara, Nepal

September 2018

Courses: Geographic Information System| Remote Sensing | Digital Terrain Model | Principles of Photogrammetry| Satellite Positioning |Computer Programming Cartography and Geoinformation Visualization | Geodetic Positioning and Gravity Field | Land Administration and Management | Design and implementation of GIS

SKILLS

Software: ArcGIS Pro, ArcGIS Desktop, ArcGIS Online, ArcGIS Enterprise, Terrset, QGIS, ERDAS, ENVI, Google Earth Engine, Open Street Mapping (OSM).

Skilled in mapping and data integration:

- Spatial Analysis: Experienced in identifying patterns and trends in geospatial data.
- Cartography & Visualization: Adept at creating high-quality maps and spatial visuals.
- Web GIS: Skilled in developing interactive GIS applications.
- Spatial Databases: Proficient in managing and querying geospatial databases.
- Experienced in processing and analyzing LiDAR, UAV imagery, and GNSS data.

Programming Language: C++, JavaScript

EXPERIENCE

GIS and Sustainability Intern

SWCA Environmental Consultants, Pensacola, FL

June – August2025

- Digitized and analyzed spatial data (wetlands, bat surveys, housing points) for cultural and natural resource projects.
- Extracted and processed NHD, NWI, and soil datasets; managed data on company server databases.
- Produced maps and maintained accurate attribute data for environmental assessments.
- Consistently met project deadlines, communicated progress, and incorporated feedback to improve deliverables.

Graduated Teaching Assistant/ Instructor

The University of West Florida, Pensacola, FL

August 2024-Present

- Introduction to Earth Science (Lecture Section) and (Lab Section).
- Introduction to GIS(lab)
- Graded assignments and managed attendance records, ensuring accurate and timely tracking of student progress.
- Supporting lab sessions covering topics such as cartography, minerals, rocks, plate boundaries, GIS, volcanoes, soils, hydrogeology.
- Conducted hands-on lab activities and provided one-on-one support to students, fostering a deeper understanding of geological concepts.

Geomatics Instructor

School of Geomatics, Kathmandu, Nepal

September 2022 – July 2024

- Taught Remote Sensing: Covered topics including the Introduction to Remote Sensing, and the interaction of Electromagnetic Radiation (EMR) with the atmosphere and Earth materials.
- Conducted hands-on training in image analysis, including:
- Observing and analyzing pixel data of multi-spectral images.
- Performing image sub setting, mosaicking, and enhancement.
- Stacking layers and preparing multi-spectral images.
- Geo-referencing satellite images.
- Digital image classification and accuracy assessment.

GIS Analyst

FDEC, Pokhara, Nepal

April 2019- September 2022

- Data Analysis & Digitization: Used ArcGIS Desktop to create and compare various data sources for accurate building and road geometry. Digitized building features and identified missing attributes based on a criteria data model.
- Quality Control & Assurance: Performed quality control/assurance checks on collected data including error analysis and corrections to ensure data accuracy and completeness.

Data Quality Specialist

Kathmandu Living Labs, Kathmandu, Nepal

February 2019 - April 2019

- Import existing datasets into OSM and remote mapping of building footprints and road networks using Earth Observation data for Kathmandu and Dar es Salaam.
- Develop crowdsourcing protocols for exposure data collection in OSM and implement ground data collection in both cities using the data models.
- Deliver final report with collected data from ground and remote mapping efforts.
- Software used: OSM, EO tools, and data collection platforms.

Digital Internship and Leadership Program

Kathmandu Living Labs, Kathmandu, Nepal

November 2018- December 2018

- Created polygon features for location-based infrastructure in three geographical areas (Terai, Hills, and Mountains).
- Collected field data using OSM tools, conducted community-based research, and wrote detailed reports.

PROJECTS

- Impact of drought on crop production, water management and livelihood in Ramechhap District of Nepal using Satellite-Based Drought Severity Index (DSI)- Worked for preparing Manuscript.
- Delineation of Groundwater Potential Zones for Agricultural Sustainability and Livelihood Enhancement in Bharatpur District through Spatial Analysis and Multi-criteria Decision Analysis (MCDA)-Under Peer Review.
- The carbon stock estimation of Above Ground Tree biomass: A case study of Gharmi Dada, Pokhara- Undergraduate Dissertation.

VOLUNTEER AND TRAINING

- Training on Open Street Map coverage for learning to use georeferenced data for making Pokhara resilient city and for participation in Open Data Day 2016 by Kathmandu Living labs.
- Participation and Training on "Mapathon: Covering the basics and general trend of Digital Mapping" at Institute of Engineering, Western Region Campus on 27th Dec,2015.
- Selected for Volunteer Community Surveyor Program (FIG YOUNG SURVEYOR'S) 2023- VCSP's event, creating a Land Tenure Reform System for Mars.
- Volunteered for updating and improving Open Street Map coverage for learning to use georeferenced data for making Pokhara resilient city and for participation in Open Data Day 2016.

CONFERENCE AND PARTICIPATION

- Poster Presentation on Northwest Florida Association of Environmental Professionals, Pensacola, Florida, Oct 1, 2024(Symposium).
- Poster Presentation in Southeastern Division of the American Association of Geographers, Nov 23-25 2024 Greenville, SC.
- Selected for Poster Presentation American Geophysical Union (AGU), 9-13 December 2024 in Washington, D.C.

LICENSE AND PROFESSIONAL MEMBERSHIP

- Licensed Geomatics Engineer.
- Membership of Nepal Engineering Council: A licensing body for Engineers in Nepal.
- General membership of Nepal Engineer's Association.
- General Membership of Geomatics Engineering Student Association Nepal.

REFERENCE

1. **Dr. Kwame Owusu-Daaku**
Position: Associate Professor
Department: Earth and Environmental Sciences
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2. **Dr. Jason T. Ortegren**
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