

DINESH LAMICHHANE

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PROFESSIONAL SUMMARY

GIS and Remote Sensing professional with 4+ years of experience in geospatial analysis, spatial data management, remote sensing, and GIS mapping. Proficient in ArcGIS Pro, QGIS, Python, SQL, and UAV photogrammetry, with expertise in spatial analysis, geoprocessing, geodatabase management, and map production. Experienced in delivering geospatial solutions for government, transportation, environmental, and disaster risk management projects through accurate spatial analysis and data-driven decision-making.

EDUCATION

Jacksonville State University

08/2025 - Present

Master of Science in Geographic Information Sciences and Technology *Jacksonville, Alabama*

Outstanding Student Award in GIS & Technology |

Thesis: Spatial Analysis of Flood Modeling, Sediment Dynamics & Channel Migration, Tallapoosa River, AL

IOE Pashchimanchal Campus, Tribhuvan University

11/2017 - 07/2022

Bachelor of Engineering in Geomatics Engineering *Pokhara, Nepal*

Thesis: Automatic Detection of Building, Surface Area, and Roof Type in UAV Imagery Using Deep Learning

TECHNICAL SKILLS

GIS & Spatial Analysis: ArcGIS Pro, ArcGIS Online, QGIS, ArcGIS StoryMaps, ArcGIS Dashboards, ArcGIS Enterprise, ArcGIS Survey123, ArcGIS Field Maps, ArcGIS QuickCapture, HEC-RAS, Spatial Modeling, Cartography,

Remote Sensing & Earth Observation: Satellite Image Processing, LULC Classification, Change Detection, DEM & Terrain Analysis, Google Earth Engine

UAV & Drone Mapping: Pix4D, Drone2Map, Agisoft Metashape, DroneDeploy, UAV Photogrammetry, Orthomosaic & 3D Model Generation

Programming & Data Science: Python, R, C/C++, Spatial Data Analysis, Geospatial Machine Learning

Field & Data Collection: ArcGIS Survey123, Field Maps, Workforce, QuickCapture, GPS Surveys, Geospatial QA/QC

Languages: English (Fluent), Nepali (Native), Hindi (Proficient)

PROFESSIONAL EXPERIENCE

GIS Intern | Indiana Department of Transportation (INDOT)

05/2026 - Present

- Performed GIS-based spatial analysis to support roadway safety evaluations, including identification of horizontal and vertical curves, and delineation of passing and no-passing zones.
- Developed and managed geospatial datasets and maps to support transportation planning and infrastructure improvement projects.
- Analyzed road network and traffic data to identify safety trends and assist in data-driven decision-making for roadway design and safety enhancements.

Graduate Teaching Assistant | Jacksonville State University

08/2025 - 04/2026

- Instruct and support 20+ students per semester in ArcGIS Pro workflows, geospatial data processing, spatial analysis, and GIS laboratory exercises.
- Assist faculty with GIS research activities, grading, and curriculum development for geospatial science coursework.
- Provide one-on-one technical mentoring in map creation, spatial modeling, and GIS software proficiency.

GIS Analyst | NAXA

03/2024 - 07/2025

- Led a cross-functional GIS team delivering 50+ thematic maps, dashboards, and StoryMaps for government agencies, NGOs, and international organizations across 10+ projects in Nepal.

- Processed and analyzed UAV and satellite imagery using ArcGIS Pro, QGIS, Pix4D, and Agisoft Metashape, reducing manual processing time by ~30% through optimized workflows.
- Conducted flood risk analysis, terrain modeling, and land use mapping for humanitarian, infrastructure, renewable energy, and urban planning initiatives.
- Managed GPS-based field verification and geospatial QA/QC workflows, achieving >95% spatial accuracy across all deliverables.

GIS and Drone Data Technician | [Nepal Flying Labs](#)

03/2022 - 02/2024

- Processed 1,000+ UAV images using Pix4D, Drone2Map, Agisoft Metashape, and DroneDeploy to generate orthomosaics, DEMs, DSMs, and 3D terrain models for disaster response and environmental monitoring projects.
- Led drone-based post-disaster damage assessments for the 2023 Western Nepal Earthquake, providing geospatial data to support recovery planning for 5+ affected communities.
- Conducted UAV surveys across 15+ sites for landslide change detection, terrain analysis, and debris volume estimation.
- Developed GIS datasets, StoryMaps, and visualization products; delivered stakeholder training to 50+ field personnel across government and NGO partners.

SELECTED PROJECTS

(Explore all projects at: www.lamichhanedinesh.com.np/projects)

Horizontal Curve Detection & Roadway Safety Analysis - Vincennes District, Indiana

- Developed GIS workflows to detect horizontal curves and extract key geometric parameters (radius, length, deflection) across the district road network.
- Analyzed crash data, traffic volumes, and curve geometry to identify and rank the most dangerous curves for safety improvements.

Drone-Based Rapid Damage Assessment - Western Nepal Earthquake 2023

- Led aerial surveys and collected high-resolution drone imagery across 5+ earthquake-affected communities; processed data in Pix4D and Agisoft Metashape to generate orthomosaics and 3D terrain models.
- Conducted GIS-based damage assessment in ArcGIS Pro; developed StoryMaps and geospatial visualization products disseminated to 3+ humanitarian response agencies.

Spatial Mapping & Flood Risk Assessment for Solar Farm Site Selection

- Conducted spatial mapping, terrain analysis, and flood risk evaluation supporting siting of a renewable energy installation; georeferenced and digitized paper-based maps to create unified geospatial datasets.

GIS-Based Cell Tower Planning - HEXAGIS

- Performed terrain analysis, land use mapping, and signal coverage modeling to identify optimal locations for cell tower expansion, improving network planning efficiency for telecommunications clients.

CERTIFICATIONS & TRAINING

Foundation of GNSS | GIS for Climate Action (Esri) | Cartography (Esri) | Going Places with Spatial Analysis (Esri) | Sediment Transport with HEC-RAS | Transform AEC Projects with GIS and BIM (Esri) | Geospatial Data Analysis with ChatGPT & Google Earth Engine | Introduction to Remote Sensing | Intermediate Machine Learning | Python for Data Analysis

AWARDS & ACHIEVEMENTS

- [Esri StoryMaps Competition 2024](#) - Winner, Humanitarian and Disaster Response Category (international competition)
- Outstanding Student Award in GIS & Technology - Jacksonville State University, 2025