Pawan Thapa

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EDUCATION

Ph.D. Geography (GIS & Remote Sensing) – University of Alabama, USA *(GPA: 4.0)* — *2022–Present*
M.Sc. Geoinformatics – University of Muenster, Germany — *2017*
B.Sc. Geomatics Engineering – Kathmandu University, Nepal — *2013*

PROFESSIONAL EXPERIENCE

Teaching Assistant, University of Alabama — *2022–Present*
- Mentored **93+ students** in GIS, Remote Sensing, UAV labs; developed hands-on training modules.

Lecturer, Kathmandu University — *2019–2022*
- Taught GIS, Python, Remote Sensing; supervised research projects for **90+ students**.

Head of Department, Nepal Banepa Polytechnic Institute — *2018–2019*
- Managed curriculum, staff (10), and **150+ students**; led diploma-level courses.

Geoinformatics Expert, Laxmi Shrestha & Co. — *2017*
- Executed GIS-based urban planning and disaster risk projects across **10+ districts**.

SELECTED PROJECTS

- **NASA SWOT & USGS NGWOS**: Sedimentation analysis & water quality monitoring using UAV & satellite data.
- **River Meander Classification (CUAHSI)**: Applied ML/DL for fluvial dynamics modeling.
- **Hurricane Helene Impact Study**: Assessed river morphology changes in East Tennessee & NC.
- **LiDAR & UAV Mapping**: Advanced ecological development projects using DGPS drones.

HONORS & TRAINING

- **Travel Award**, UCGIS CyberTraining — *2025*
- **Finalist**, GISS Student Honors Paper, AAG — *2025*
- **HydroLearn Fellowship**, CIROH Conference — *2024*
- NASA Virtual Field Trips, UAV Demonstration, Hyperspectral Workshop — *2023–2025*

TECHNICAL SKILLS

GIS Tools: ArcGIS Pro, QGIS, ENVI, ERDAS, Google Earth Engine
Programming: Python, R, JavaScript, Java, C/C++
Cloud Platforms: AWS, Azure, Google Cloud, HPC
Hydrology Tools: HEC-RAS, HY-8
Field Instruments: UAVs, LiDAR, DGPS, HyCAT, ASD, YSI

MEMBERSHIPS & LICENSES

AAG | AGU | IEEE | ISPRS | Global Soil Erosion Mapping Initiative
Licenses: FAA sUAS, Driving, Vessel