

Pratikshya Regmi

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Education

PHD IN GEOSPATIAL ANALYTICS NORTH CAROLINA STATE UNIVERSITY EXPECTED GRADUATION- MAY 2027 <ul style="list-style-type: none">Geospatial Analytics Program (Developing Innovative Methodology for Fusing Lidar and UAS Data)	MASTERS IN GEOSPATIAL SYSTEMS ENGINEERING TEXAS A & M UNIVERSITY- CORPUS CHRISTI AUG 2021-AUG 2023 <ul style="list-style-type: none">Application of UAS photogrammetry and geospatial AI techniques for palm tree detection and mapping.
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BACHELORS IN GEOMATICS ENGINEERING | KATHMANDU UNIVERSITY, NEPAL | JULY 2014-DEC 2018

- Analyzed the Effect of Image Overlap, Number of GCPs & its Distribution Pattern on Overall Accuracy of UAV Photogrammetry.

Key Skills

ArcGIS Pro, ArcMap, ArcGIS Online, ArcGIS Story Maps, GRASS GIS, QGIS, Python, R

Hackathon

- 2025 NC PSI Hackathon**
Winner- Advanced Track (Hacked climate data to identify top five best suited crops for North Carolina using AI/ML models)
- 2024 NC PSI Hackathon**
Participant- Beginners Track (Classified crops and weeds using machine learning models)

Honors and Awards

- Women in GIS Award - *Women in GIS* 2025
- Outstanding Entering Doctoral Student Fellowship (2023-2024) - *NCSU* 2023
- C.J. Davidson Scholarship - *TAMUCC* 2022
- Conrad Blucher Institute Scholarship - *Conrad Blucher Institute* 2021
- Geospatial Surveying Engineering Scholarship - *TAMUCC* 2022
- ASPRS Student Conference Presentation Grant - *ASPRS* 2022
- Best Paper Presented - *Unmanned Aerial System in Geomatics Conference, IIT Roorkee, India* 2019

Experience

GRADUATE RESEARCH/TEACHING ASSISTANT | NORTH CAROLINA STATE UNIVERSITY (NCSU) AUG 2023-PRESENT

- Processing post-Helene imagery; developing LiDAR-UAS data-fusion models for accurate terrain modeling; building a geospatial-LLM assistant; contributing to GRASS GIS.

RESEARCH ASSISTANT | INSTITUTE FOR TRANSPORTATION RESEARCH AND EDUCATION (ITRE) (JUNE 2023-PRESENT)

- Integrated parachutes in Mavic drones for operations-over-people waivers.

GRADUATE RESEARCH ASSISTANT | TEXAS A&M UNIVERSITY-CORPUS CHRISTI (TAMUCC)| SEPT 2021-AUG 2023

- Conducted UAS flights, processed imagery, developed 2D/3D web maps and dashboards in ArcGIS Online, and maintained TAMUCC's historic UAS imagery site using ArcGIS online.

GEOMATICS ENGINEER | NEA ENGINEERING COMPANY LTD. KATHMANDU NEPAL | JAN 2021-JULY 2021

- Performed GIS mapping and satellite-based analysis to optimize transmission line routes for minimal cost, shortest path, and maximum community benefit.

Training

EARTH SURFACE PROCESSES INSTITUTE (ESPIN) 2024 | UNIVERSITY OF COLORADO, BOULDER | AUG 2024

- Gained proficiency in numerical modeling, collaborative scientific software development, and open-source cyberinfrastructure.

Presentations

- Hosted 2-hour clinic: Intro to GRASS GIS & Tangible Landscape - CSDMS Annual Meeting, 2025; UC Boulder, CO.
- Assessing LLMs for Geospatial Analysis - IALE North America, 2025; Raleigh, NC.
- Visibility Analysis for Safe UAS Operation using GIS - AGU, 2024; Washington, DC.
- Wildfire Ash Transport after Precipitation: Coupling Dorado & Overland Flow - CSDMS Fall Webinar (Virtual).
- Hosted 2-hour clinic: Coastal Evolution & Inundation Modeling with GRASS GIS (Jupyter) - Montclair State Univ., NJ.
- UAS Campus Survey Project Overview - FIG Working Week, 2023; Orlando, FL.
- UAS Surveying & Geospatial AI for Palm Tree Detection/Monitoring - TAMUCC Symposium, 2023.
- Historical Perspective of UAS Monitoring for Campus Facilities & GIS - ASPRS Annual Conf., 2022; Denver, CO.
- Effect of GCP Distribution/Count on UAV Photogrammetry Accuracy - UASG-2019; IIT Roorkee, India (Best Paper).

Volunteering

STEM RESOURCE FAIR FOR K-12 STUDENTS WITH DISABILITIES AT NCSU (2024 AND 2025)

- Created hands-on activities introducing satellite imagery and its many applications.

Organizations/Leadership

- AGU H3S Sub Committee (Member, 2025-Present)
- Nepali Student Association (NSA) NCSU (Vice President, 2025-Present)
- Geospatial Graduate Student Organization (GGSO) (External Affairs Officer, 2024-2025)
- American Geophysical Union (AGU) (Member, 2024-Present)
- American Society for Photogrammetry and Remote Sensing (ASPRS) (Member, 2023-2024)