

Pradip Shrestha

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LinkedIn



SKILLS

- Software: ArcGIS Pro, ArcGIS Online, QGIS, HEC-HMS, Erdas Imagine, ArcGIS Field Maps, Survey123
- Versed in R, Python/Arcpy, Google Earth Engine, Matlab, Statistical Package for Social Science (SPSS)
- Proficient in integrating spatial data from diverse sources, machine learning, and technical write-ups

EDUCATION

Master of Science: Environment and Sustainability	University of Michigan (Michigan)	2023
• Specialization in Geospatial Data Sciences		
• Honors: Academic Merit Fellowship, Catalyst Leadership Circle Fellowship		
Master of Science: Environmental Science	Tribhuvan University (Nepal)	2015
• Awards: IDRC's grant by the Institute for Social and Environmental Transition Nepal (I-SET Nepal)		
Bachelor of Science: Environmental Science	Tribhuvan University (Kathmandu, Nepal)	2008

EXPERIENCE

Geospatial Analyst: Facility Analytics and Mapping, Texas A&M University	(07/2024-)
• Perform spatial analysis and automate data workflows within an ArcGIS Enterprise environment to support multi-program initiatives, streamline spatial data processing, cutting manual map production time from a full workday to under 20-30 minutes per update, and produce map products, including Clery Act compliance maps for campus safety and regulatory reporting.	
• Develop and maintain geoprocessing models and Python/arcpy scripts, and standardized procedures to optimize feature classes, and document best practices, reducing routine data maintenance and GIS request handling time by 50%. Process LiDAR data to generate 3D building models of campus facilities and conduct manual feature class updates with change documentation to ensure data integrity.	
• Develop Survey123 forms for campus asset inventory and tracking (restrooms, landscape, water bottle refilling stations) to facilitate database updates with enterprise asset management systems. Manage spatial data requests from campus units, providing feature class extracts and custom datasets to support cross-departmental initiatives.	
• Configure and maintain ArcGIS Indoors using CAD/BIM data to create floor-aware web maps and develop dashboards to visualize campus assets and operational data, improve stakeholder access to facility information, indoor navigation, and operational decision-making.	

Research Assistant: Center for Global Change and Earth Observations, Michigan State University	(08/2023-06/2024)
• Conducted rigorous analysis of radar and satellite time series data within diverse cropping systems, contributing to field data collection, spatial analysis, and data curation initiatives.	
• Automated pre-processing workflows to streamline the transformation of raw data into visualizations. Developed custom scripts for statistical analysis pipelines, enhancing research productivity.	
• Demonstrated expertise in metadata creation following ISO standards, ensuring data quality and accessibility for future research.	

Sustainability Fellow: Graham Sustainability Institute, University of Michigan	(05/2022 – 08/2022)
• Designed and implemented a sophisticated land use classification model, utilizing image segmentation and machine learning algorithms on high-resolution ortho imagery. Achieved precise classification of surface features up to the subclass level, facilitating detailed impervious surface mapping.	

- Developed a robust parcel-level geodatabase quantifying imperviousness percentages, complete with a comprehensive procedural manual.
- Fostered collaboration with city departments to create tailored geospatial solutions. Led workshops to build team capacity and promote stakeholder engagement in sustainable urban planning initiatives.

Intern: Cooperative Institute for Great Lakes Research, School for Environment & Sustainability (05/2021 - 08/2021)

- Contributed to a team researching the impact of climate change on ecosystem services in the Great Lakes region through the application of fuzzy cognitive mapping and mental models.
- Leveraged analytical and critical thinking to uncover intricate patterns and relationships within ecosystem services. Employed sophisticated mapping techniques to visually articulate the causality, facilitating a deeper understanding and contributing to informed decision-making in ecosystem management.
- Successfully led a team of 4 in administering a Qualtrics survey, proactively fostering open communication channels and collaborative problem-solving to ensure all project milestones were met.

Climate Change Specialist: Resource Identification and Management Society, Nepal (08/2015 - 07/2016)

- Leveraged both GIS-based mapping to conduct vulnerability analyses, resource mapping, and risk assessments, fostering local ownership and knowledge integration in the development of 6 Local Adaptation Plans of Action for climate change adaptation.
- Facilitated stakeholder engagement through empathetic communication and active listening, ensuring local insights were integrated into the development of effective climate adaptation strategies.
- Utilized thematic maps to effectively convey complex project progress and achievements, enhancing the clarity and engagement of annual reports and informational brochures.

Environmental Consultant: Practical Action, Nepal (04/2015 - 07/2015)

- Engaged in knowledge sharing and collaboration with the team to enhance the understanding of climate change within the sectoral programs leading to the publication of technical briefs, a toolkit, and a field manual, incorporating methodologies for situation analysis, vulnerability, and adaptation assessment.
- Executed a pre-feasibility study for the creation of an integrated watershed management project, and employed stakeholder engagement sessions to acknowledge community needs and priorities.

Research Assistant: South Asia Institute (SAI), Heidelberg University, Kathmandu (04/2013 - 04/2015)

- Contributed to the team's research efforts by conducting risk and vulnerability assessments, as well as post-earthquake shelter condition mapping to support policy discussions on disaster recovery.
- Collaborated with multidisciplinary teams to design and test survey instruments, ensuring the effective capture of community perspectives on landscape changes and habitat conditions, which informed policy discussions and strategic planning for disaster resilience.

Community Services and Affiliations

Member: Geospatial Professional Network

- Conducted urban dynamics analysis for the Great Plains using scaling rule methodology at the Centre for Global Change and Earth Observations, Michigan State University (01/2020–03/2020). Contributed to the American Red Cross Missing Maps project, supporting disaster preparedness through remote mapping (10/2019–12/2021).
- Supported American Red Cross disaster services through community outreach and logistic coordination (10/2019–12/2021). Participated in climate change awareness and biodiversity conservation initiatives with Youth Network for Social and Environmental Development, Nepal (06/2011–03/2012).