

# Pradip Shrestha

College Station, Texas, USA | 517-507-1654 | me.pradipstha@gmail.com |



## 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 writeups

## EDUCATION

<b>Master of Science: Environment and Sustainability</b>	University of Michigan (Michigan)	2023
<ul style="list-style-type: none"><li>• Specialization in <b>Geospatial Data Sciences</b></li><li>• Honors: Academic Merit Fellowship, Catalyst Leadership Circle Fellowship</li></ul>		
<b>Master of Science: Environmental Science</b>	Tribhuvan University (Nepal)	2015
<ul style="list-style-type: none"><li>• Awards: IDRC's grant by the Institute for Social and Environmental Transition Nepal (I-SET Nepal)</li></ul>		
<b>Bachelor of Science: Environmental Science</b>	Tribhuvan University (Kathmandu, Nepal)	2008

## EXPERIENCE

- Geospatial Analyst:** Facility Analytics and Mapping, Texas A&M University (07/2024-)
- Perform geospatial analysis and automate data workflows within an ArcGIS Enterprise environment to support multi-program initiatives, streamline spatial data processing, and produce dynamic map products for campus operations and external stakeholders.
  - Developed and updated models, scripts, and tools to optimize feature classes, streamline map production, and improve database management practices.
  - Assisted in preparing technical documentation and contributed to the standardization of GIS procedures, supporting continuous improvement and knowledge sharing within the team.
- 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

**Volunteer:** Centre for Global Change and Earth Observations, Michigan State University (01/2020 – 03/2020)

- Conducted a geospatial analysis on urban dynamics in the Great Plains, USA, based on the scaling rule, to understand the power dynamics of socio-economic outputs and urban development.

**Volunteer:** American Red Cross (10/2019 – 12/2021)

- Engaged in community outreach, and logistic support for disaster services, and contributed to the Missing Maps project, aiding in disaster preparedness and response efforts.

**Volunteer:** Youth Network for Social and Environmental Development, Nepal (06/2011 – 03/2012)

- Participated in initiatives focused on climate change awareness, biodiversity conservation, and community outreach, contributing to the promotion of sustainable environmental practices.