Pradip Shrestha

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TECHNICAL SKILLS

- Software: ArcGIS Pro, QGIS, Erdas Imagine, ENVI, HEC-HMS, ArcGIS Field Maps, GPS, Qualtrics
- Versed in R, Python, Google Earth Engine, Matlab, Tableau
- Communication, Collaboration, Problem-solving, Adaptability

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

Research Assistant: Center for Global Change and Earth Observations, Michigan State University   (08/2023-)
- Conducted comprehensive evaluations of radar data in cropping systems and contributed to field data collection, utilizing Field Maps and GPS, and data curation.
- Applied specialized skills in data visualization and metadata extrapolation to optimize dataset development and enhance pre-processing workflows, ensuring accurate and timely information for team support.
- Enhanced research methodologies through the automation of exploratory data analysis, significantly improving the efficiency and accuracy of descriptive, time-series, and textural analyses.
- Undertook an extensive literature review and compiled research articles on land surface phenology and remote sensing, identifying emerging trends and methodologies in the field.

Sustainability Fellow: Graham Sustainability Institute, University of Michigan   (05/2022 – 08/2022)
- Design and implementation of advanced land use classification, notably in sub-level impervious surface mapping. Utilized advanced geospatial methods and machine learning algorithms on high-resolution ortho-imagery to accurately classify surface features.
- Engineered a comprehensive geodatabase detailing percentage imperviousness at the parcel scale, supplemented with a detailed procedural manual and metadata. Additionally, designed and executed analytical procedures, ensuring desired outcomes through meticulous testing and application evaluation.
- Collaborated with city departments to develop geospatial solutions, facilitating workshops to communicate findings with stakeholders to support sustainable urban planning.

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.
- Led a team of 4 in administering surveys to targeted stakeholders, conducting comprehensive evaluations, fostering an environment of open communication, and ensuring project milestones were met through effective team collaboration.

Climate Change Specialist: Resource Identification and Management Society, Nepal   (08/2015 - 07/2016)
- Utilized GIS-based mapping for vulnerability analysis, resource mapping, and risk assessments as part of the development of 6 Local Adaptation Plans of Action for climate change adaptation.
- Employed a participatory approach, engaging stakeholders through empathetic communication and active listening to integrate local insights, thereby supporting the development of adaptive strategies.
- Crafted thematic maps to visually depict the reach and program outreach, playing a pivotal role in enhancing the clarity and impact of key communications such as annual reports and informational brochures.
- Supported grant writing efforts by providing critical data, brainstorming, and analyses, enhancing the organization's ability to secure funding for ongoing and future climate adaptation projects.

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.

Field and Program Assistant: Youth Network for Social and Environmental Development, Nepal   (04/2012 - 05/2014)
- Coordinated implementation of the *Smriti Brichhya* project, fostering participatory urban forestry by effectively engaging with residents and government entities to build community consensus and drive collaborative action.
- Facilitated community dialogue sessions to gather critical insights, which informed project direction and enhanced community participation in sustainable urban development.
- Contributed to the GPS-based mapping and monitoring of 20 local water sources, significantly improving data accuracy and reliability for the assessment of water source conditions.

Community Services and Affiliations
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.