Pradip Shrestha

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SUMMARY SKILLS

- Over 4 years of experience as a GIS Analyst leveraging ESRI technologies including ArcGIS Desktop, ArcGIS Pro, ArcPy, and ArcGIS Online to deliver geospatial solutions.
- Expert in geodatabase design, management, and administration, with proficiency in spatial modeling, ModelBuilder, and scripting for automating tasks.
- Ability to craft efficient workflows for project completion within tight deadlines, complemented by strong communication, collaboration, and organizational skills.

TECHNICAL SKILLS

- Software: ESRI ArcGIS, Erdas Imagine, QGIS, Statistical Package for Social Science (SPSS), NetLogo, HEC-HMS, Field Map
- Versed in R, Python, Google Earth Engine, ArcPy, ArcGIS Online
- Working knowledge of SQL, Tableau, and Adobe Photoshop

EDUCATION

Master of Science: Environment and Sustainability (April 2023) University of Michigan (Ann Arbor, MI)

- Concentrations: **Geospatial Data Sciences**
- Awards: Academic Merit Fellowship, Catalyst Leadership Circle Fellowship

Master of Science: Environmental Science (2015) Tribhuvan University (Kathmandu, Nepal)

- Awards: IDRC's grant, Institute for Social and Environmental Transition Nepal (I-SET Nepal)

Bachelor of Science: Environmental Science (2008) Tribhuvan University (Kathmandu, Nepal)

RESEARCH EXPERIENCE

GIS Research Assistant: Center for Global Change and Earth Observations, Michigan State University (08/2023-)

- Evaluate commercial synthetic aperture radar (SAR) time series in multiple cropping systems experiments.
- Support in collecting field measurements and photographs about canopy development and height.
- Perform spatial analysis, textural, and automated tasks in characterizing surface texture, plant growth, and development.

GIS Analyst (Fellow): Graham Sustainability Institute (05/2022 – 08/2022)

- Leveraged geospatial methods to extract and classify impervious surface features using cutting-edge image segmentation and machine learning algorithms applied to high-resolution ortho-imagery.
- Performed complex data queries and expertly compiled inputs from diverse sources, creating and refining training samples for optimal accuracy assessment, iterating the workflow to achieve an accuracy level of over 85%.
- Developed a final geodatabase of percentage imperviousness at the parcel scale, complete with a highly effective procedural manual, for replication, and a visually appealing map layout.

Intern (GIS): Cooperative Institute for Great Lakes Research, School for Environment & Sustainability
(05/2021 - 04/2022)

- 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.
- Administered surveys using Qualtrics to stakeholders and performed data cleaning and processing to ensure data accuracy and reliability, allowing for accurate analysis.

- Conducted statistical and geospatial analyses to identify patterns and relationships among ecosystem services and their determinants and developed maps to communicate the causality.

Climate Change/GIS 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 six Local Adaptation Plans of Action for climate change adaptation at the community level.
- Applied a participatory approach to GIS mapping to engage stakeholders in climate change adaptation planning.
- Developed maps to visually represent program achievements, and spatial extent, contributing to the team's publication drafts and central database development.

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

- Compiled a GIS-focused annotated bibliography on climate change within the sectoral programs of Practical Action, leading to the publication of technical briefs and a toolkit. These resources incorporated GIS methodologies for situation analysis, vulnerability, and adaptation assessment in the agriculture sector.
- Executed a pre-feasibility study for the creation of an integrated watershed management project, employing geospatial tools for comprehensive analysis and planning, and facilitating stakeholder engagements.

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

- Contributed to the team's research efforts by conducting GIS-based risk and vulnerability assessments, as well as post-earthquake shelter condition mapping.
- Participated in the pre-testing of GIS survey tools, collaborating with the team to refine and optimize these data collection instruments for more accurate mapping and analysis.

GIS Specialist: Youth Network for Social and Environmental Development (YONSED), Nepal (04/2012 - 04/2013)

- Assisted in the design and pre-testing of GIS survey tools, contributing to the efficient administration of surveys and GPS tracking and marking.
- Supported logistic arrangements and ensured smooth project execution, with a focus on geospatial data management and analysis.

Community Services and Affiliations

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

- Conducted a geospatial study on urban dynamics in the Great Plains, USA, based on the scaling rule, to understand the power dynamics of socio-economic outputs and urban infrastructure with city size.
- Gathered economic and geospatial data from multiple sources, cleaned and organized data, and conducted analysis to identify patterns between demographic factors and urban extension.

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

- Community outreach, logistic setups, disaster services, and missing maps unit.

Volunteer: Friendship House MSU (10/2018 –)

- Volunteer in logistic support, gardening, and event setups.