shradha-shrestha.com | sxs1462@rit.edu

SHRADHA SHRESTHA

468 Clay Rd, Apt C, Rochester, NY | +1 (585) 512-5393

OBJECTIVE

To apply my geospatial skills to reduce real-world ecological problems for community resilience. Available for full-time/ co-op.

ACADEMICS

Rochester Institute of Technology, Rochester, New York   Anticipated graduation in December 2019
M.S. in Environmental Science (GPA: 3.68 out of 4.0)
Relevant Courses: Hydrologic Application of GIS, Conservation Biology, Advanced Chemistry, Regression Analysis, Public Policy.

School of Environmental Science and Management (SchEMS), Pokhara University, Kathmandu, Nepal   2010- 2014
B.S. in Environment Management (GPA: 3.8 out of 4.0)
Thesis: Assessment of Bagmati river encroachment through the application of GIS and Remote Sensing
Honor award: Dean's list of excellence award

PROFESSIONAL EXPERIENCE

Research Assistant, Rochester Institute of Technology, Aquatic Ecology Lab   Aug 2017- Present
Advisor: Dr. Christy Tyler
Spatial analysis of INFEWS Project (Geospatial Optimization of Sustainable Waste Management System) funded by NSF.

- Assessing the ecological impact of food waste digestate storage and disposal on greenhouse gas emissions and water quality using empirical and geospatial modeling.

GIS and Data Intern, FracTracker Alliance   Jan 2019– July 2019
Studying groundwater contamination and air pollution due to hydraulic fracking in California and Colorado using geospatial modeling.

- Determining the current status of groundwater contamination in Colorado state based on literature review and hotspot analysis; a statistically significant GIS-based method.

Knowledge Management Monitoring and Evaluation Officer, Group of Helping Hands (SAHAS Nepal)   2014 - 2017
GIS application:
- Mapping, sampling, site selection, and watershed analysis.
Data analysis and field monitoring:
- Regular field visits to remote districts in working areas (visited eight out of seventeen districts).
- Technical report writing of five major projects and organizational annual report writing.
Documentation and communication:
- Promote and disseminate organizational knowledge through brochures, training manuals, promotional videos, news/ success stories, and update the website.
- Regular communication between field staff and funding partners.

Art and creative activism Intern, Global Power Shifter Nepal   2014
Organized exhibitions, street drama, knowledge walk on UNESCO world heritage sites of Kathmandu to combat climate change.

TECHNICAL SKILLS

(skills sorted to indicate current work-based familiarity)
- Geospatial: ArcGIS Pro, ArcGIS Desktop (10.x and 9.3), Model-builder, ArcGIS Online, ArcPy, Story map and QGIS.
- Advanced GIS for hydrology: ArcSWAT, LTHIA, RUSLE, Hotspot analysis, Bathymetry.
- Programming Languages: Python, JavScript (Intro).

- Databases & Query Languages: SQL
- Other: SPSS, Cartography.

PUBLICATIONS

- **S. Shrestha**, C. Babbit and C. Tyler. "**Digestate disposal using geospatial analysis".** (In preparation).
- E. Morison*, A. Shipman*, **S. Shrestha***, E. Squier* and K. S. Whitney. **"Evaluating the Ocean Cleanup, a Marine Debris Removal Project in the North Pacific Gyre, Using SWOT analysis".** Case Studies in the Environment, University of California Press. 2019. (* equal contribution).
- **S. Shrestha** and C. Tyler. "**Ecological Impacts of Food Waste Digestate Disposal".** Poster session on 45th Annual Scientific Paper Session of Rochester Academy of Science (RAS). 2018.
- **S. Shrestha** and S. Thapa. **"Assessment of Bagmati River Encroachment through application of GIS and Remote Sensing".** 3rd graduate conference on Environment and Sustainable Development, Himalayan Knowledge Conclave. 2017.
- **S. Shrestha** and S. Thapa. **"GIS and Remote Sensing Based Assessment of the Encroachment of Bagmati River Corridors in Kathmandu, Nepal".** Water and Sustainable Development Seminar, National Academy of Science and Technology (NAST). 2015.

RESEARCH PROJECTS

- **L-THIA (GIS) Model for Pearl Oatka Watershed in New York State** 2018
  Assessing the potential ecological impacts of digestate application on the fields and water bodies [link].
- **Evaluating the Effectiveness and Limitations of The Ocean Cleanup: A Marine Debris Removal Project in the North Pacific Gyre** 2018
  Analyzed the pros and cons of Boyan Slat's project vs. other mechanisms
- **Walkthrough to Berger Nepal Pvt. Ltd. in Bhaktapur Industrial Area** 2014
  Surveyed on the manufacturing process of Berger Paints and the environmental performance of the industry (its Cleaner Production Mechanism).
- **Solid waste management problem in Kathmandu valley** 2014
  Monitored the landfill sites of Kathmandu Municipality to know its effects on public health
- **Environmental Monitoring along B.P. Highway** 2013
  Conducted independent research to monitor adverse environmental impacts on B.P highway (the road lining Kathmandu valley to east Nepal, the highway constructed in 2014).

HONORS & AWARDS

Energy conference scholarship, EnergyPath at DeSales University	2019
Title winner- "Best Newbie Hacker", Women in Computing Hackathon (WiCHacks 2018) [link].	2018
RIT Merit Scholarship (75%)	2017
Full Merit Scholarship, SchEMS College	2010

VOLUNTEERING AND ENGAGEMENT

- **Executive Member**, *Samajik Sahayog Manch*, 2015- Present
  Founding member of the NGO working in the rural terrain of Bhaktapur district to facilitate humanitarian, environmental sustainability and community developmental activities.
- **Student Reporter**, *Ministry of Science, Technology and Environment and Pokhara University* 2014
  Mainstreaming climate change on in the curricular of Bachelor of Science in Environmental Management
- **Volunteer,** *National Eco-fair Exhibition* 2014
  College representative to demonstrate eco-friendly home model, organized by Environmental Ministry
- **Editorial team**, *Global Power Shifter Nepal* 2014
  A book published by campaigners combating climate adverse impacts of climate change in Nepal
- **Volunteer**, *Third Meeting of SAARC Ministers on Poverty Alleviation* 2013
  Selected for volunteering in South Asian level Conference, Kathmandu