

## SHRADHA SHRESTHA

371 Robert Quigley Dr, Scottsville, NY

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### RESEARCH INTEREST

Geospatial Analytics, Hydro-ecological Modeling, River Management, and Urban Management

### ACADEMICS

**Rochester Institute of Technology**, Rochester, New York

Anticipated graduation in December 2019

M.S. in Environmental Science (GPA: 3.69 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– Present

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), ArcGIS Online, ArcPy, Story map and QGIS.
- Advanced GIS for hydrology: ArcSWAT, LTHIA, RUSLE, Hotspot analysis, Bathymetry.
- Programming Languages: Python, JavaScript (Intro).
- Databases & Query Languages: SQL
- Other: SPSS, Cartography.

## PUBLICATIONS

- **Ecological Impacts of Food Waste Digestate Disposal (Abstract and Poster)** 2018  
Poster session on 45th Annual Scientific Paper Session of Rochester Academy of Science (RAS)
- **Third graduate conference on Environment and Sustainable Development (Abstract and Poster)** 2017  
Himalayan Knowledge Conclave
- **Water and Sustainable Development Seminar (Poster)** 2015  
National Academy of Science and Technology

## 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
- **The city of Madhyapur Thimi** 2013  
Studies urban environment management on historical Madhyapur Thimi municipality
- **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

- 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