



Sonali Sharma

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SUMMARY

Geospatial Analyst and Environmental Scientist with 7+ years of experience delivering spatial analysis and GIS workflows across research and interdisciplinary projects. Strong expertise in 2D–3D remote sensing datasets, GIS modelling, and scalable geospatial workflow design using ArcGIS, QGIS, Python and R. Skilled at translating complex environmental datasets into actionable spatial insights that support evidence-based planning and real-world decision-making. Proven track record of delivering results across international, interdisciplinary & cross-functional teams. Motivated to apply a blend of scientific foundation and hands-on GIS expertise within applied consultancy, urban, nature & environmental planning contexts.

SKILLS

GIS & Statistical Analyses; Visualization: QGIS, ArcGIS Pro, GeoServer, Google Earth Engine, Spatial Databases

Programming & Automation: Python, R, JavaScript, HPC workflows, UNIX/Linux

Project Management: Strategic planning, Interpretation and Decision-making

Communication & Collaboration: Cross-functional & Cross-cultural Teamwork, Adaptability, Clear communication, Confident demeanour

Research: Scientific writing, Experimental design, Analytical thinking

LANGUAGES

English (C2 – Fluent), German (A2; currently enrolled in B1 course), Hindi (Native)

WORK EXPERIENCE

Postdoctoral Researcher

University of Helsinki, Finland

Sep 2023–Oct 2025

- Designed and automated GIS workflows (Python, R, HPC) integrating LiDAR and high-resolution land cover data, reducing processing time by 70%.
- Developed a reproducible machine learning-based pipeline for 3D urban spatial analysis.
- Coordinated interdisciplinary GIS project with Finnish Environment Institute, delivering actionable map products and scientific outputs.
- Configured and managed spatial datasets to support biodiversity and urban planning projects.
- Presented findings at interdisciplinary workshops with municipal authorities and international conferences.

Visiting Doctoral Researcher DAAD Fellow

Martin-Luther-University Halle-Wittenberg, Germany

Aug 2020–Sep 2021

- As a DAAD Bi-national Fellowship recipient, collaborated with German research teams on urban sustainability research.
- Led project on future plausible urban growth and climate change scenarios – using ArcGIS, IDRISI, Python, R, UNIX/Linux, and Google Earth Engine.

- Presented at international conferences and workshops focused on urban sustainability and geospatial methods.

Graduate Research Fellow (PhD)

Jawaharlal Nehru University, New Delhi, India

Aug 2018–Jun 2023

- Modelled urban ecosystem services – soil erosion, flood regulation, heat regulation, and carbon sequestration – using ArcGIS, QGIS, Python, R, and Google Earth Engine.
- Integrated multi-source datasets (climate, land cover, remote sensing) for urban growth and heat island studies.
- Delivered geospatial models, reports, and spatial analysis frameworks for planning applications.
- Supported and mentored junior researchers in GIS workflows and data processing.
- Presented at international conferences, seminars, workshops, and summer schools on sustainability and geospatial methods.

CERTIFICATIONS

Fundamentals of GeoAI: Deep Learning for Geospatial Analysis & Urban Analytics in Python

Milan Janosov, Udemy

2026

- Built and trained a U-Net model for urban image segmentation with interactive visual outputs.
- Gained hands-on functional knowledge of Python for urban livability analytics.

Location & AI – Basic & Deep Dive into Practical Solutions

Location Innovation Hub

2025

- Developed holistic understanding of GeoAI technologies across AI/ML, GIS, environmental analysis, and urban planning.

Going Places with Spatial Analysis & Make an Impact with Modern Geo Apps

ESRI MOOCs

2024–2025

- Gained hands-on expertise in cloud-based spatial analysis and built interactive geo apps and dashboards for decision-making.

Urban Nature: Connecting Cities, Sustainability, and Innovation

Lund University, Coursera

2024

- Explored governance strategies for implementing nature-based solutions with multifunctional outcomes.

EDUCATION

Master of Science in Environmental Sciences

Central University of Rajasthan, India

2015–2017

- Courses: Atmospheric Sciences, Ecology, Geography, Geology, Remote Sensing-GIS, and Oceanography.

Bachelor of Science in Biology

Mohan Lal Sukhadia University, India

2012–2015

- Courses: Botany, Zoology, and Chemistry.

INTERESTS

Traveling, Yoga, Meditation, Forest/Nature walks, Dance