

Mahnoor Naeem

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EDUCATION

University of Toronto

Honours Bachelor of Science

Double Major in Geographic Information Sciences & Geography

Mississauga, ON

Completed Aug 2023

WORK EXPERIENCE

Trubel&Co

Geospatial Justice Facilitator

Remote

Oct 2025 – Present

- Lead interactive workshops using GIS and spatial data to help participants explore environmental and social justice issues and their real-world impacts.
- Develop and implement geospatial activities that demonstrate how mapping and data analysis can reveal inequities and inform actionable solutions.

Independent Research

Full-Stack Geospatial Developer

Remote

Aug 2024 – Present

- Designed and implemented a modular end-to-end wildfire validation system using near-real-time satellite data (MODIS, VIIRS, Landsat), including custom classification algorithms and spatial analysis to improve detection accuracy.
- Built and maintained sensor-specific SQL databases and developed scalable Python data pipelines (Pandas, Rasterio, GeoPandas) for ingestion and cross-validation, while creating frontend interfaces with React and JavaScript to visualize wildfire detection results.

Q Spark Group

Solutions Architect

Remote

Oct 2023 – Aug 2025

- Led end-to-end deployment of BigID's Data Security Posture Management (DSPM) software, leveraging expertise in Linux, orchestrating containerized applications on Kubernetes, and automating deployment processes using Helm, ensuring seamless integration and optimal performance for diverse client environments.
- Developed a Node.js-based password manager app, showcasing programming proficiency and significantly bolstering client data security.

NASA

Geospatial Data Analyst & Project Manager | Narragansett Bay Water Resources

Boston, MA

Jun 2024 – Aug 2024

- Led an in-person team of researchers analyzing harmful algal blooms in Narragansett Bay in partnership with the United States Environmental Protection Agency by leveraging NASA Earth observations, MATLAB, SeaDAS, and ArcGIS Pro.
- Served as the main point of contact between project partners, science advisors, and the DEVELOP Team, ensuring efficient and professional communication and the timely submission of deliverables.

Geospatial Data Analyst | Alaska Ecological Conservation

Jan 2024 – Mar 2024

- Analyzed river ice phenology effects on caribou migration in Northwestern Alaska using ArcGIS, R, and Google Earth Engine JavaScript API, producing diverse end products for project partners utilizing data visualization techniques, including posters, presentations, social media posts, and technical reports. These were presented at the Goddard Space Flight Center.
- Collaborated with early-career researchers to deliver comprehensive project findings and remote sensing insights to the project partner, the National Park Service.

University of Toronto Mississauga

Research Assistant & Data Analyst

Mississauga, ON

May 2023 – Aug 2023

- Analyzed and interpreted cultural ecosystem services data from 4000 institutes of higher education using Excel, informing strategic decision-making processes and facilitating evidence-based interventions.
- Created GIS maps with ArcGIS Pro to illustrate land ownership patterns, aiding land use planning and resource management. Presented findings at the Summer Undergraduate Research Fair, showcasing strong data visualization and communication skills.

AdvantAge Ontario

Data Analyst Intern

Remote

Jun 2021 – Jul 2022

- Used Power BI, Excel, and PowerPoint to analyze and visualize year-over-year trends in the Long Term Care funding index, supporting data-driven decisions.
- Presented comprehensive data and research to the CEO and board members, facilitating informed strategic communication. Investigated statistical methodologies to validate data and recommend improvements in service quality.

LEADERSHIP EXPERIENCE

Women in Science & Computing - University of Toronto

Vice President & Co-founder

Mississauga, ON

Sep 2019 – Apr 2022

- Led the establishment of the Women in Science and Computing Club at the University of Toronto, fostering a supportive community and empowering women pursuing careers in STEM fields.
- Orchestrated a program to help students work on a side project with the help of upper-year mentors

ADDITIONAL

Technical Skills: Python, Go, React, TypeScript, R, SQL, GDAL, Rasterio, GeoPandas, PostGIS, QGIS, Cloud Optimized GeoTIFF (COG), STAC, Google Earth Engine, Google Cloud Platform (GCP), AWS, Docker, Kubernetes, CI/CD (GitHub Actions, Jenkins), Terraform, Apache Airflow, Dask, Pandas, NumPy, SciPy, Jupyter Notebooks, Temporal.io, TensorFlow, PyTorch, Scikit-learn, Git, Agile methodologies, Jira, Technical communication, Cross-functional collaboration, Problem solving, Project leadership, Stakeholder engagement