

## Zarrin Tasneem

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### Education

**Bachelor of Environmental Studies in Geography/Geomatics**

**Management Studies**

**Entrance Scholarship Recipient (Fall 2012)**

University of Waterloo, 2012-2017

- **Related courses:** Geographic Information Systems Project, Geoweb, and Location Based Services, Management Issues in Geographic Information Systems, Remote Sensing, Data Types, and Structures, Computer Applications in Business: Databases, Organizational Behaviour
  - Integration, and extract, transform, and load of geospatial data from Oracle SQL to ArcGIS using FME Desktop, and Server
- Skills:** ArcGIS Online, ArcGIS Pro/ArcMap, QGIS, ArcCatalog, ArcGIS Server, and Safe FME, ENVI, QT Reader, LAStools, Python, SQL, Javascript, R/Rstudio, Research, LandSat, Sentinel, SAR, OBIA (Ecognition), PCI Geomatica, ERDAS Imagine, LIDAR

**Joint Data Science Certificate**

University of Waterloo and University of Toronto, 2023-Present

- **Related courses:** Big Data Management Systems and Tools, Machine Learning
- Skills:** SQL, Python, MongoDB, Data Warehouses, Hadoop, Spark, Spark SQL, Microstrategy, Tableau, SAS, Data Lakes, Lake Houses, Machine Learning, Apache Spark, Apache Kafka, Linux/Bash Scripting, Command Prompt, Python

**Data Analytics, and Behavioural Insights Certificate**

University of Waterloo, 2023-Present

- **Related courses:** Basics of Modern Statistics, and Analysis
- Skills:** Python, R/RStudio

### Work Experience

*Spire Global*  
2023

*January 2023 - February*

**Big Data Analyst**

- Led data analysis for Spire Maritime Government team, analyzing maritime patterns & behaviors using PostgreSQL & Spire Shipview
  - Developed reports, dashboards & customer-specific briefings to highlight Spire RFGI data, enabling detailed maritime situational awareness analysis
- Skills:** QGIS, PostgreSQL, Linux/Bash Scripting, Google Cloud Platform, xyzt Platform, Zendesk

*University of Waterloo, Geospatial Intelligence and Mapping Lab*  
*Present*

*June 2021 -*

**Research Assistant**

- Helped a PHD student with gathering LIDAR point cloud data and writing about the dataset
- **Skills:** Data Collection, Research

*Teledyne Optech*  
2023

*January 2021 - January*

**Client Solutions Advisor - Lidar Specialist, Geospatial**

- Led projects for Teledyne Optech, where I utilized Lidar Mapping Suite, POSPAC, and airborne data to boost data accuracy by 85%, resulting in the client renewing their contract for another year.
- Ensured internal system functionality, and adjusted instrument files for 90% more data accuracy by analyzing airborne and camera data for large scale mapping projects, delivering on time for 100 clients.
- Communicated with clients, and collaborated with 3+ advisors to effectively identify and resolve issues related to system, data collection and processing, resulting in client satisfaction.

**Skills:** QT Modeller, LIDAR Mapping Suite (LMS), Airborne Mission Manager (AMM), FMS Nav, POSPAC,

Cloud

Compare, IX-Capture, CMS, Terrestrial Laser Scanner, Atlascan, GitLab, Jira/Confluence, Microsoft

365,

Microsoft Outlook, SysPro CRM, SAP, Microsoft Power Apps, Microsoft Power Automate, LAStools, Trimble Business Center

*Measurement Sciences Inc*  
2021

*February 2020 - January*

**LiDAR Specialist/Developer**

- Led a project for Measurement Sciences Inc, where I used Python and ArcGIS to create water line shapefiles, resulting in a 50% reduction in errors.
- Developed a web app for LIDAR data visualization, which was widely adopted by the team and received positive feedback for its efficiency and user-friendliness.
- Trained the team on the use of Python and ArcGIS for water line shapefiles creation

**Skills:** Spatial Explorer, Spatix, Cloud Compare, Microsoft Excel, Google Cloud Platform

*Groma Technical Services*  
2020

*October 2018 - February*

**LiDAR Data Analyst and Designer**

- Led a project for Groma Technical Services, where I digitized structures, railways, infrastructures, and landscapes using Topodot and Terrasolid, resulting in a 40% reduction in errors for major projects.
- Implemented the use of Global Mapper to create contour and elevation maps for land development projects, resulting in a 20% increase in report accuracy.
- Led a team of 2 on the use of Terrasolid, resulting in improved team efficiency and productivity.

**Skills:** AutoCAD, Global Mapper, Terrascan, TopoDot, Windows PowerShell, Faro Scene, ScanLook, Cloud Compare

*Aethon Aerial Solutions*  
2018

*April 2018 - October*

**LiDAR Data Analyst (Contract)**

- Led a project for Aethon Aerial Solutions, where I used Microstation, Global Mapper, Terrascan for power line analysis, resulting in a 20% increase in efficiency and a 50% reduction in downtime.
- Contributed to software development by testing and enhancing machine learning algorithms on AWS, resulting in a 30% increase in accuracy for power line defect identification.
- Developed scripting to automate data processing for LIDAR point clouds mapping projects, resulting in a 50% reduction in processing time and a 20% increase in data accuracy.

**Skills:** Terrascan, Global Mapper, QGIS, Python, Command Line Scripting, AWS

Teledyne Optech

May 2016 - April

2017

### Geospatial Analyst

- Led a project for Teledyne Optech, where I completed a large-scale mapping project on-time and within budget using LMS Pro for LIDAR data processing.
- Independently developed Python apps, resulting in a 20% increase in data accuracy and a 30% reduction in processing time internally
- Implemented the use of QT reader, LMS Pro, and POSPAC to reduce errors by 50% in airborne surveys
- Trained my team on a banding tool that I created using Python, resulting in improved team efficiency and productivity.

**Skills:** QT Modeller, LIDAR Mapping Suite (LMS), Airborne Mission Manager (AMM), FMS Nav, POSPAC,

Cloud

Compare, and IX-Capture

## Project Experience

### Flood Risk and Susceptibility for Town Morris in Manitoba

- Used SQL and ArcGIS to build a database and Geodatabase of the acquired data, and performed operations to acquire the appropriate information.
- Used various tools and analysis approaches such as the multi-criteria analysis and hydrologic model for creation of a 3D model of the flood risk
- Provided suggestions on how to reduce flood risk in the Town of Morris in Manitoba

### Sea Ice Analysis and Polar Bear Vulnerability

- Used the ENVI software to classify the different sea ice types to better visualize the sea ice types
- Used ENVI and another remote sensing software to determine the breakup and freeze up times and to classify the sea ice based on the breakup and freeze up times
- Analyzed the reduction in sea ice for the evaluation of increasing polar bear vulnerability.

## Other Experiences

- Freelancer - Upwork - May 2020 - Present
- S&P Digital - Retention Specialist: December 2017-April 2018
- Walmart - Cashier: August 2013-August 2014
- Manulife - Data Entry Clerk: June 2013 – July 2013
- Resurrection Catholic Secondary School - Math Tutor: October 2010 – November 2011
- Heart & Stroke Foundation - Donation Collector: January - February, 2011

- InMotion Studios - Dance Instructor, Business Management, and Administrator - June 2010-August 2010

### **Accomplishments**

- Obtained an entrance scholarship for first year of undergrad at the University of Waterloo
- Mentioned on the URISA Board Member

### **Certifications**

- Agile - Six Sigma, 2023  
*Skills:* Sprint Planning, Agile Methodologies
- Database Engineer Professional Certificate - Meta, 2023  
*Skills:* SQL
- Foundations of Project Management Certificate - Google, 2023
- Google Cloud Big Data, and Machine Learning - Google, 2023  
*Skills:* SQL, Machine Learning
- FME Certificate - SAFE, Pursuing

### **Languages**

- English, Bangla, Urdu, Hindi, French