

Tristan Gingras-Hill, M.Sc.

Phone: (418) 952-3024 | Email: Tristan.gingrashill@gmail.com | Web: <http://tristangingrashillnrgis.ca/>

Summary of Qualifications

- Application Specialist for all Geographical Information Systems (GIS) associated software and development.
- 5+ years of conducting sampling protocols, data processing, QAQC, validation & analysis on spatial data.
- 5+ years of GIS proficiency and knowledge of various ESRI platforms and open-source software.
- 5+ years of developing scripts in R and Python to automate repetitive tasks and ensure data conformity.
- 5+ years of collaborative partnerships amongst multidisciplinary teams to address environmentally issues.
- 5+ years of project management, data management and GIS technical support associated skills.

Relevant Projects

Project Coordinator - NWT Permafrost Mapping Inventory February 2019-Current
Northwest Territories Geological Survey Yellowknife, NWT/Quebec City, QC

- Collaboration between academics, government officials (Territorial & Federal), First Nations and Industry to update hazard maps and spatial databases for permafrost distribution throughout the NWT ([Project details](#)).
- Integration, development, and management of spatial databases (PostgreSQL, PostGIS) and servers, to facilitate data sharing amongst collaborators to ensure the interoperability of various data formats for proprietary software usage (ESRI, PCI Geomatics) and open-source software (QGIS, Google Earth, Leaflet).
- Administration of an ArcGIS online / Portal for ArcGIS account and the development of data collection surveys (Survey123), for ground truthing data and planning aerial surveys.
- Lead-instructor for GIS courses in small indigenous communities throughout the NWT to build collaborative partnerships for ground truthing remote sensing data with land users in remote areas ([CBC article](#)).

GIS Research Associate – Department of Geomatics (6-month contract) September 2018-February 2019
Laval University / Resolute Forest Products Quebec City, QC

- Coordinated an NSERC Engage Grant between Resolute Forest Products, the provincial ministry of Forest, Wildlife & Parks and Laval University to improve the efficiency of Lidar within Quebec's forestry sector for better predicting harvest volumes within harvest stands.
- Completed data Quality Assurance and Quality Control (using SQL) within a normalized database structure (MS Access & ArcGIS Desktop) and determined that Lidar precision is reduced in mixed and deciduous forest stands.

GIS Application Specialist (7-month intern) January 2018-June 2018
Haliburton Forest & Wildlife Reserve Haliburton, ON

- Efficient communication with the client to ensure maximum Quality Assurance with respect to a well-organized file geodatabase to be used for sustainable forestry practices and the development of protected areas determined through spatial analysis using a variety of GIS software (. e.g., Enterprise geodatabase, ArcMap 10.5, ArcGIS Pro).
- Creation of python scripts and ArcGIS toolboxes to automate data normality, replicability, and conformity.
- Development of an interactive web map template (Leaflet – JavaScript API), displaying areas of recreational activities and navigation using an open sourced service ([Interactive Web Map](#)).

Fieldworker – Data Collection - Aquatic Invasive Species Prevention (4-month contract) May 2017-August 2017
Alberta Parks Lethbridge, AB

- Developed surveys and collected data on benthic invertebrates and water quality to assess potential risks and the health of various aquatic ecosystems through means of spatial analyses throughout southern Alberta.
- Data collection and management using ESRI's ArcGIS Collector application.

Forest Biologist (3-month contract) January-March 2017
Natural Resources Canada/ Great Lakes Forestry Research Center Sault Ste. Marie, ON

- Conducted literature reviews and developed a corresponding database comparing mining disturbances in the Athabasca Oil Sands Region to that of the Greater Sudbury Region with specific interest towards soil, hydrological and biological (vegetation) characteristics.

Teaching Assistant/ Laboratory Instructor
University of Waterloo

2014-2016
Waterloo, ON

- Mentored undergraduate students in a variety of disciplines including environmental statistics (ENVS 278), physical geography & GIS (GEOM 103) and field ecology (ENVS 200).

Education

GIS Application Specialist, Post-Graduate Diploma
Fleming College, School of Environmental & Natural Resource Sciences

June 2018
Lindsay, ON

- Intensive program with an emphasis on developing a core understanding of **ESRI** software (. e.g., ArcGIS Desktop, ArcGIS Pro, ArcGIS Enterprise, ArcGIS online, Survey123, Collector, etc.).
- Additional emphasis on developing fundamental data management skills (e.g., Microsoft Access), coupled with a strong proficiency in various programming languages (i.e., SQL, Python, HTML, CSS, JavaScript, R).
- Practical knowledge of surveying equipment and techniques and Computer Assisted Design (CAD) ([Portfolio sample](#)).

M.Sc. Geography and Environmental Management
University of Waterloo/ Hydrometeorology Research Group

December 2016
Fort McMurray, AB/Waterloo, ON

- Research-based thesis investigating the successful trajectories of forested uplands undergoing reclamation within a reconstructed watershed in the Athabasca Oil Sands Region.
- Successfully conducted sampling protocols to collect hydrological, biogeochemical, ecological, and meteorological data to be incorporated within a relational database and processed (. i.e., Rstudio, ArcGIS). Results led to reports written for non-scientific and scientific audiences ([Peer-reviewed publication](#)).

B.Sc. Biology – CO-OP
University of Sherbrooke

December 2013
Sherbrooke, QC

- Initiation to database management (. e.g., Microsoft Access), processing and validating raw data (. i.e., R, SPSS, Excel) and using spatial databases to analyses temporal and spatial trends (. e.g., ArcGIS, PCI Geomatics).

Certification

- Drone piloting certificate (Transport Canada)
- PADI scuba diving
- Clean Drivers License (QC)
- H₂S Awareness (Suncor Inc.)
- Possession and Acquisition License (PAL)
- Wilderness/ Remote First Aid & CPR/AED Level C
- Pleasure Craft Operation (Transport Canada)
- ATV Safety Training (WLU)
- GPS Certification (YK – SAR)
- Mine Awareness (Suncor Inc)

Additional Skillset

- Hydrological sampling: Well installation and meteorological instrumentation (. i.e., piezometers, data loggers, meteorological stations).
- Statistical analyses using a variety of software (i.e., Excel, Rstudio, SPSS, Python, ArcMap).
- Strong interest in field work, under a variety of conditions including remote northern locations.
- **Fluent in French both oral and written.**
- Vegetation sampling regarding several types of protocols representing the Western Boreal Plain Flora and Southern Ontario Flora.
- Knowledge of various programming languages (SQL, PHP, HTML, CSS, JavaScript, R), and the ability to quickly learn others autonomously.

Awards & Activities.

- Environmental Studies Graduate Experience Award (2014-2016) – University of Waterloo.
- The president's Athlete Academic Honor Roll (2014-2015) – University of Waterloo.
- Student-Athlete Scholarship from the U de S foundation (2011-2013) – Université de Sherbrooke.
- Environmental Studies Graduate Experience Award (2014-2016) – University of Waterloo.
- Member of Yellowknife Search & Rescue.
- Active cycle-tourist, having completed numerous lengthy trips across Ontario, Quebec, and Alberta.
- Varsity Rugby Athlete from 2011-2015 representing both the universities of Sherbrooke and Waterloo.
- Operation Christmas Child (2014-2016/Waterloo, ON) & SPCA dog walker.
- An active member of rugby communities, having coached at various levels across various age groups.