

# Andrew Branson

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## EDUCATION

### Queen's University, 2014- Pres

Master of Applied Science in Geophysics and Geodesy

Graduated June 2022

Earned Geoscience BC scholarship, and KEGS scholarship (Canadian Exploration Geophysical Society)

Bachelor of Applied Science in Geological Engineering

Graduated May 2018

## EXPERIENCE

### Geospatial Analyst | TRE Altamira

May 2021 – Present

Managed InSAR projects from feasibility analysis to data delivery. Head of the scripting team and SFTP management team. Used Python, R and Powershell.

### Field Manager | Pioneer Exploration

July 2020 – April 2021

Conducted UAV magnetics surveys, in charge of piloting, flight planning, monitoring UAV telemetry in flight and data QC. I am currently in the process of obtaining my commercial drone pilot license. Projects have required numerous methods of site access such as Sherp/Fattruck, snowmobile and helicopter.

### Research Assistant | Geophysics and Geodesy lab, Queen's University

November 2017 – July 2020

Planning and execution of field survey in BC targeting podiform chromite occurrences in Quesnel Terrane. Including ~200 line-km of ground magnetics with some EM-31 and RES/IP.

DEM generation using Sentinel-1, PSInSAR monitoring of subsidence in urban areas and DInSAR analysis of earthflows. Scripting in Python, R and MATLAB. Worked in a Linux

environment and developed a thorough understanding of how computers work and how to rebuild/upgrade them to be capable to handle large data processing workflows.

Permafrost Research Assistant | **Geological Survey of Canada**

May 2018 – September 2018

Multiple field projects as well as GIS based periglacial feature identification and mapping project along the Dempster and Inuvik-Tuktoyaktuk Highways.

Field work along the Mackenzie River valley and delta from Wrigley to Tuktoyaktuk, the Great Slave region, NWT and the Kivalliq region, Nunavut. The work included active layer probing, swapping data loggers, thermistor cables, thaw tubes, weather stations and near-surface ground temperature loggers. Assisted with maintaining, taking down, conducting experiments related to thermal gradients, permafrost degradation in burned areas, lithalsas, sand wedge formation, thaw slumps, thermokarst lakes and deformation of abandoned roads. Assisted in running electrical resistivity tomography surveys, drilling programs to install thermistor cables with heave sleeves and ground truthing of DInSAR observations from RADARSAT-2 and ALOS-2.

Park Warden | **Ontario Ministry of Natural Resources and Forestry**

June 2016 – September 2017

Night warden at Rideau River Provincial Park in the summer of 2016 where I conducted routine vehicle and foot patrols and enforcing compliance under the Provincial Parks and Conservation Reserves Act, Liquor License Act, Trespass to Property Act and Highway Traffic Act. Interior warden in Algonquin Park North Operations in 2017 where I went on multi day interior maintenance and enforcement patrols by multiple modes of transport including float plane and canoe.

Canoe Tripping Guide | **Camp Pathfinder**

June 2012 – August 2015

Canoe tripping camp based in Algonquin Park. Attended/worked at the camp since 2007, as an employee I guided multi-week canoe trips in Algonquin Park and Temagami.

**Industry Conferences |**

Presented research at the undergraduate Inquiry at Queen's 2017, a delegate at Queen's Space Conference 2017, PDAC 2016, 2017, 2018, 2019 and 2020 (poster presentation). A delegate at the Queen's Oil and Gas Conference 2016 and 2018 and at the Queen's Conference on Business and Mining 2018.

**Volunteering |**

Peer Coach, orientation leader for the faculty of Arts and Science in 2015 (a Gael). A member of the Orientation Team Implementing Safety (OTIS) for the Engineering orientation week in 2016. Geo-Olympics coordinator for Miller Club.

## SKILLS / KNOWLEDGE / COURSES

### Experience in geological/wilderness environment including:

- ✦ University courses in: Satellite Positioning, Satellite Geophysics, Metallogeny, Economics of Mineral Exploration, Advanced Applied Geophysics, Vector Calculus, Terrain Analysis and GIS, Database Management, Visualization in Geoscience, Quantitative Analysis in MATLAB, Groundwater Engineering, Subsurface Contamination, Differential Equations, Rock Engineering Design, Rock Structures, Geochemistry, Statistical Analysis, Mineralogy, Petrology, Sedimentology, Engineering Economics, Urban Geography, Law, Geotechnical Engineering, Environmental Toxicology.
- ✦ Design courses included: Environmental risk assessment and climate adaptation of a hazardous waste facility based on downscaled climate projections. Developed and proposed an exploration plan for the Black Fox gold mine following a site visit. Designed a hyperloop transport system.
- ✦ Field courses in conducting geological surveys, creating regional geological maps, planning traverses using surveying tools, surficial geological analysis etc. Received site tours in mines, mills and exploration properties.
- ✦ Using geophysical equipment in field mapping (eg. UAV Mag, Mag, ERT, MAX-MIN, EM-31, LIDAR, GPR, seismic refraction and GPS)
- ✦ Qualified chainsaw operator and experience working with heavy equipment, helicopters and floatplanes.
- ✦ Experience in bear safety with formal firearms qualifications in bear dispatch.

### Computer skills

- ✦ Python (proficient), MATLAB (proficient), R (intermediate), BASH (intermediate), Powershell (intermediate), C (beginner), ArcGIS, ArcGIS Pro, Microsoft Excel, Access, Project, Word, Outlook and PowerPoint.

## QUALIFICATIONS

### Park Warden Initial Training-

Instruction on law, legislation and use of force. Including interpretation of legislation, practice in courtroom etiquette, testifying as a witness, notetaking, report writing and preparing crown briefs.

### SP-100 Forest Firefighting Course-

Forest firefighting training course.

### Others:

- **Pleasure Craft Operators Card**
- **G Driver's License**
- **Defensive driving certification**
- **Firearm PAL**