

Keenan Nicholson

Software Developer & GIS Analyst

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Education

Bachelor of Arts

Major in Computer Science, minor in Geography

Memorial University of Newfoundland

Jan 2021 – Dec 2023

Bachelor of Science

Major in Computational Mathematics

Memorial University of Newfoundland

Sep 2016 – Apr 2020

Work Experience (selected)

Natural Resources Canada

Geospatial Research Assistant

Nov 2024 – Present

Corner Brook, NL

- Analysis of hyperspectral imagery to identify and characterize disease in white pine saplings by leveraging and refining existing methodologies from peer-reviewed research.
- Adapted hyperspectral data processing pipelines for UAV-collected imagery, enabling large-scale forest quality assessments.
- Contributed to the development of innovative tools and workflows for geospatial data analysis to support ecological research and forest management initiatives.

Resource Innovations

Software Developer

Jan 2024 – Oct 2024

Corner Brook, NL

- Data driven development of tools and services to help streamline and improve quality of life for clients.
- Research and development of algorithms and machine learning tools to aid in resource management.
- Collection, processing, and analysis of LiDAR and imagery data via Unmanned Aerial Vehicles (UAV).

C-CORE

Image Analyst

Apr 2023 – Sep 2023

St. John's, NL

- Analyzing satellite imagery using technologies such as ArcGIS Pro, Python, Pandas, and Matplotlib to monitor iceberg and river ice activity.
- Data driven full-stack development of web applications.

Projects

MoodMap

Personal Project

September 2024

An application allowing users to upload "mood ratings" tied to their geographic location. These ratings are visualized on a map, where a heatmap or color-coded point markers appear depending on the zoom level. When clicked, each marker displays the mood rating and a user-provided text description of the area's "mood".

<https://github.com/Keenan-Nicholson/Mood-Map>.

- Frontend: React.js, HTML, CSS, MapLibre GL.
- Backend: Express.js, Tanstack Query, Postgres.

Technical skills

Languages and Frameworks GIS

Python, MATLAB, R, JavaScript/TypeScript, React.js, HTML, CSS.
ArcGIS Pro, QGIS, Pandas/GeoPandas.