# Keenan Nicholson

*Geospatial Software Developer*

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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*

## Relevant Experience

**Natural Resources Canada**
*Geospatial Research Assistant*

*Nov 2024 – Present*
*Corner Brook, NL*

- Develop and enhance software tools for remote sensing data analysis, focusing on LiDAR and hyperspectral data, to support forest management and ecological research initiatives.
- Design workflows and automate geospatial data processing and analysis using R, MATLAB, Python, QGIS and ArcGIS Pro.
- Collaborate with multidisciplinary teams to design solutions for complex geospatial challenges, improving decision making in forest management.

**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 for resource management applications.
- Collection, processing, and analysis of LiDAR and imagery data using Unmanned Aerial Vehicles (UAV).

**C-CORE**
*Image Analyst*

*Apr 2023 – Sep 2023*
*St. John's, NL*

- Analyze satellite imagery using technologies such as ArcGIS Pro, and Python to monitor iceberg and river ice activity.
- Data-driven full-stack development of geospatial 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

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|---|---|
| **Languages and Frameworks** | Python, MATLAB, R, JavaScript/TypeScript, React.js, HTML, CSS. |
| **GIS** | ArcGIS Pro, QGIS, Pandas/GeoPandas. |