

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)

C-CORE

Image Analyst

Apr 2023 – Sep 2023

St. John's, NL

- Data driven full-stack development of web applications
 - Frontend: React.js, HTML, CSS, Material UI (MUI), and Chakra UI.
 - Backend: Python, Pandas, SpatioTemporal Asset Catalogs (STAC)
- Analyzing satellite imagery using technologies such as ArcGIS Pro, Python, Pandas, and Matplotlib to monitor iceberg and river ice activity.

Memorial University of Newfoundland

Research Assistant

Jan 2019 – May 2019

Corner Brook, NL

- I received a full-time work grant from NSERC. During that time, I researched the properties of algebraic groups as codes and developed an algorithm to decode twisted permutation codes. These codes demonstrate improved reliability and reduced minimum distance compared to other codes in specific scenarios.

Projects

Social Media Hiking App

Personal Project

Work in Progress

I am actively working on an application that enables users to share their outdoor adventure experiences by uploading .gpx files. The current stage of development involves a backend system that converts and uploads these .gpx files into a PostGIS database. These uploaded adventures are then displayed on an interactive map. Currently, I am in the process of implementing user authentication and login functionalities.

In the upcoming phases of the project, I plan to establish friendship connections between users, allowing them to interact by liking and commenting on each other's adventure posts. <https://github.com/Keenan-Nicholson/hiking-app>.

- Frontend: React.js, HTML, CSS.
- Backend: Python, GeoPandas, FastAPI, TiPg, Postgres (PostGIS).

ISS Tracker Twitter Bot

Personal Project

May 2022

This application implements Cheerio and node-fetch libraries to scrape real-time International Space Station location data from NASA's website. It then formats and utilizes the Twit library to tweet the ISS visibility details for specific cities in Newfoundland and Labrador. https://github.com/Keenan-Nicholson/ISS_Twitter_Bot.

Technical skills

Programming Languages

GIS

Frameworks

Operating Systems

JavaScript / TypeScript, Python, HTML, CSS

ArcGIS Pro, QGIS, GeoPandas, SpatioTemporal Asset Catalogs (STAC)

React.js, Chakra UI, Material UI

Windows, MAC, Linux