

Jacob (Jake) Waldner

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EDUCATION

Dalhousie University

Bachelor of Computer Science (Co-op)

Halifax, NS

Sept. 2023 – Sept. 2027

- Achieved 3.85/4.3 GPA

TECHNICAL SKILLS

Languages: Python, JSX, JavaScript, HTML/CSS, JSON, Java, C/C++, MySQL, PHP

Frameworks: React, Material UI, Node.js, Express.js, Vue.js, Flask, FastAPI, Bootstrap, Sequelize, Streamlit

Developer Tools: Git, Postman, VS Code, PyCharm, IntelliJ, Jupyter Notebooks, Auth0, Vite

Amazon Web Services: ALS, Athena, EC2, IAM, Lambda, S3, Sagemaker AI, SES

Libraries: Plotly, NumPy, Matplotlib, Polars, Pandas, JUnit

Certifications: [Python 3 Programming Specialization \(University of Michigan\)](#)

EXPERIENCE

Junior Software Developer (Co-op)

Glas Ocean Electric

May 2025 – Dec. 2025

Halifax, NS

- Developed [Client Portal](#), a full-stack web app utilizing low power recorders on vessels to power various features
 - * **Front-end:** React, MUI, and Leaflet. 50+ JSX Components spanning 7 views
 - * **Back-end:** Express.js, MySQL, Sequelize, Redis, and Auth0. 20+ API endpoints with JWT authentication
 - * **Tracking:** Displays real-time locations and metrics of vessels through Amazon Location Services
 - * **Routing:** Used the A* algorithm and the H3 geospatial indexing system alongside machine learning insights and real-time weather data to facilitate a vessel trip planning system between selected points
 - * **Driving Score:** A custom mathematical system for determining vessel driving score out of one hundred points using historical trip data fetched from Athena
 - * **Alerts:** Implemented AWS Lambda and SES-based email alerts for speeding, fuel usage, and geofence entry/exit with user-configurable parameters
- Collaborated with ML Engineer to build SageMaker AI training pipelines using Jupyter notebooks
- Developed a data visualizer using Streamlit (Python) and AWS that allows vessel data to be viewed before/after training and conditionally retrigger training
- Renewed for a second four-month term following positive performance review

Independent Consultant in Program Design

Scratchpad Consulting

Sep. 2022 – Aug. 2023

Halifax, NS

- Developed a financial planner aggregation tool with Vue.js, FastAPI (Python), and the Plaid REST API
- Developed and documented an in-house data visualization library in Python using Plotly

PROJECTS

[Windlytics](#) | React, Leaflet, MUI, Flask, ML

Nov. 2025

- An offshore wind turbine simulator that projects potential revenue from energy generated intended for use with Nova Scotia's 'Wind West' project
- Developed an LGBM wind-speed forecasting Machine Learning Model, improving prediction accuracy by 15% (reduced RMSE) by training on three million date-and location-stamped records
- Designed a dashboard in React using Leaflet and MUI to showcase the potential revenue based on turbine type, placement, and time duration
- Created in 48 hours for the 2025 Cognizant BrAInstorm Challenge hackathon, winning 2nd place (\$1000)

[SimpleEQ](#) | C++, JUCE Framework

Nov. 2024

- An equalizer audio plugin (VST, AU) in C++ using the JUCE Framework
- Shapes the frequency content of audio, with several different sliders for customization