

Guillaume Beaulé

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EDUCATION

University of Waterloo

Candidate for Honours Bachelors of Computing and Financial Management

Waterloo, Ontario

Aug. 2020 – Apr. 2025

TECHNICAL SKILLS

Languages: C/C++, TypeScript, JavaScript, Java, Python, SQL, C#, HTML/CSS, R, Racket

Frameworks & Libraries: React, Node.js, Jest, JUnit, Tailwind CSS, i18n, JavaFX, gRPC, pandas, NumPy

Developer Tools: Git, Docker, AWS, Jira, Azure, Postman, Postico, VS Code, Visual Studio, Eclipse, QEMU

Finance Skills: Accounting, Excel, Numerical Methods, Monte Carlo, Statistics, Pricing Models, Financial Modeling

EXPERIENCE

Full Stack Software Engineering

Sep. 2024 – Dec. 2024

Relay Financial

Toronto, ON

- Helped build the accounting page in React, used by 200+ companies to manage their transactions.
- Updated REST endpoints to allow transactions to be exported to accounting services (Xero, Quickbooks).
- Worked with design team to build new components using Tailwind CSS, then replaced old components.

Full Stack Software Engineering

Jan. 2024 – Apr. 2024

Quota

Halifax, NS

- Led development of a long-running job framework with check-pointing using AWS Lambda & DynamoDB.
- Helped write Xero and Quickbooks transaction import jobs using REST & PrismaDB, cut import time by 60%.
- Created financial query language to analyze Xero/Quickbooks transactions, allowing customers to see trend lines and write custom queries. This was tested with Jest.

Software Developer

Aug. 2022 – Dec. 2022

Employment and Social Development Canada

Remote

- Streamlined software modernization, completed three stages of data pipeline using Java, C#, PowerShell, REST.
- Built a tool to synchronize Excel stored on SharePoint with Azure Boards, able to create 500+ tickets in seconds.
- Made program to generate JSON schema based on input schema to accelerate validation pipeline, tested in JUnit.
- Developed tool to convert UML diagram and metadata into Markdown to speed up creation of documentation.

Full Stack Software Engineering

Jan. 2022 – Apr. 2022

Purolator

Remote

- Engineered frontend and backend for package tracking solution used across Canada.
- Created REST API in Javascript on AWS Lambda to track packages, requiring interaction with warehouse APIs to reconstruct their journey through the delivery system. Tested in Jest.
- Built new landing pages in React, improved accessibility and internationalization for pages and components.

Backend Software Developer

2017 – 2018

Society for Academic Freedom and Scholarship

Halifax, NS

- Worked alongside payment provider to upgrade payment processing security.
- Built backend in PHP and MySQL to store, search, add, and retrieve articles.

PROJECTS

Factor Investing Replication & Machine Learning | *Python, Pandas, NumPy, Keras*

- Collected 40 years of financial data from CompuStat and WRDS to perform time-series analysis.
- Used machine learning to optimize factor selection resulting in a portfolio with Sharpe ratio of 2.415.

Offline Reverse Geocoder with Localization Support | *C++, Typescript, REST*

- Built tools to generate JSON files that can be used to find a city and location information based on coordinates.
- Uses GeoNames and OpenStreetMap information to generate localization JSON for selected languages.

Optical File Transfer using QR Codes | *Typescript, Expo, Expo Go, React Native*

- Device to device file transfer by optically scanning a rapid sequence of QR Codes, achieving 5Kb/s.

Media Database Project | *C++, ONNX Runtime, CUDA, Faiss, Python*

- Software to perceptually hash videos using image classification models, storing embeddings in a Faiss vector database.