

# RYAN LOFTUS

[LinkedIn](#) | [Portfolio Website](#) | [rloftus@uwaterloo.ca](mailto:rloftus@uwaterloo.ca) | [GitHub](#)

## SKILLS

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**Languages:** Python, C/C++, Java, Kotlin, JavaScript/TypeScript, Rust, C#, SQL, Bash, HTML/CSS

**Technologies:** Git, Node.js, React, Express, Hibernate, Flask, Spring, .NET, JUnit, Spark, GPT, GraphQL, Protobuf, TailwindCSS, MySQL, PostgreSQL, SQLite, MongoDB, Redis, DynamoDB, BlazingMQ, Kafka

**Concepts:** Relational Databases, Unit Testing, Parallel Computing, ETL, Backend, Full-Stack

## EXPERIENCE

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### Bloomberg

New York, NY

Software Engineer

August 2024 – December 2024

- Built a message queue system to calculate and store cashflows for fixed income funds as new holdings data become available, ensuring clients have more accurate data
- Redesigned cashflow database schema to store cashflows as rows rather than a blob, enhancing data transparency, simplifying debugging, and eliminating parsing errors caused by endianness mismatches
- Built a microservice providing access to cashflows for fixed income funds, allowing adjacent teams to access the cashflows for their own calculations

### Datamuse

San Francisco, CA

Research Software Developer

January 2024 – April 2024

- Used GPT to auto-generate weekly digest emails summarizing popular new topics on civicsearch.org
- Processed large-scale geo-data and meeting transcripts to highlight locations discussed by city councils using Python, Apache Spark, and Databricks
- Wrote a Python script to find YouTube channels with city council meetings for US and Canadian cities, increasing the number of cities on CivicSearch by 28%
- Developed a graph algorithm to generate word puzzles used on OneLook dictionary

### Faire

Waterloo, ON

Backend Engineer

May 2023 – August 2023

- Developed an internal tool to automate creation of JIRA tickets, Notion pages, and Slack channels for new projects saving 30 minutes per project using TypeScript, React, and Express
- Added backend-driven carousels and banners to distinguish eco-friendly pages from category pages using Kotlin, Hibernate, Protobuf, MySQL, and DynamoDB
- Leveraged GPT to automatically verify uses of the 'eco-friendly seller' tag, leading to a 95% reduction in falsely used 'eco-friendly seller' tags

### Faire

Waterloo, ON

Android Engineer

September 2022 – December 2022

- Developed a company-wide Android pattern for fragment-to-viewmodel communication
- Built an IDE plugin to auto-generate boilerplate code for new app screens in a company hackathon
- Built a profile screen using MVVM architecture, improving feature parity between mobile and web

## EDUCATION

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Bachelor of Computer Science

September 2020 – May 2025

University of Waterloo

GPA: 3.98 / 4.0

## PROJECTS

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### Micro-Kernel | C, ARM

Built a micro-kernel to control model trains with I/O, a clock, and message passing

### Path Tracer | C++

Built a graphics engine that implements path tracing, microfacets, Fresnel reflection, and more