RYAN LOFTUS

LinkedIn | Portfolio Website | rloftus@uwaterloo.ca | GitHub

SKILLS

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

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

Bachelor of Computer Science   September 2020 – May 2025
University of Waterloo   GPA: 3.98 / 4.0

PROJECTS

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