

Education

University of Toronto

Honours Bachelor of Science in Computer Science, Co-op

Degree Expected: May 2021

- Awarded U of T Scholars Program Award and Renewable Entrance Scholarship
- Cumulative GPA: 3.49/4.00

Skills

Languages: Go, JavaScript, C#, Java, C++, Python, TypeScript

Libraries & Frameworks: Elasticsearch, Node.js, Express, Angular, Vue.js, RxJS, RxJava

Tools & Technologies: Docker, Bash, SQL, NoSQL, Git, Android, Linux, Vim

Experience

More at linkedin.com/jr-maingat

RBC Royal Bank

Toronto, ON

Software Developer Co-op

January 2019 – August 2019

- Developed metrics aggregation API with Node.js, Express, and RxJS for graph-based search engine built on Elasticsearch, saving analysts hours per week by automating report generation
- Implemented chunk-based algorithm for memory-efficient graph traversal and document retrieval in Express API, reducing space complexity from $O(n)$ to $O(1)$
- Engineered historical data pipeline for Elasticsearch using C#, enabling trend analysis and visualization
- Upgraded front-end framework from AngularJS to Angular 7, decreasing page load times by 10%
- **Technologies used:** JavaScript, Node.js, RxJS, Express, Elasticsearch, .NET C#, Angular, TypeScript

Ontario Treasury Board Secretariat

Toronto, ON

Software Developer Co-op

January 2018 – April 2018

- Developed Go API endpoints for government-wide intranet, decreasing page load times by up to 98%
- Implemented comprehensive backend error logging for Go API, saving hours of debugging time per week
- Reduced build times by 50% by minifying Docker images, leading to a faster Agile development workflow
- Scripted static code analysis and automated format tools in Bash, identifying potential code quality issues
- **Technologies used:** Go, Docker, Bash, Vue.js, JavaScript, SQL, JIRA, BitBucket Pipelines

Projects

More at github.com/tagniam

Durham Region Transit Live

January 2019 – March 2019

- Developed real-time transit tracking Android app designed for offline use and minimal data usage
- Architected Java/RxJava middleware for live bus tracking, seamlessly bridging SMS and REST APIs
- **Technologies used:** Java, Android, RxJava, JUnit, SQL

Turn: Hacktkober 'n' Slash

October 2017 – December 2017

- Led development of open-source C++ game with an active, collaborative community of 40+ contributors
- Reviewed 50+ pull requests for features and bug fixes, prioritizing clean and idiomatic code
- **Technologies used:** C++, Linux, TravisCI, CMake

Vim for Visual Studio Code

July 2017 – August 2017

- Refactored and tested repeatable commands for open-source Vim emulator, featured in project roadmap
- **Technologies used:** TypeScript