

Ahmad Beirkdar

Toronto, Ontario | Software Engineering Student

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Skills

Languages C++ • Rust • Python • C • Java • PHP • Lua
Technologies Qt5 • Boost • Git • Linux • Ghidra • IDA Pro • MySQL • MongoDB

Experience

Research Assistant - Post Quantum Cryptography

Toronto, Ontario

Ryerson University, under Dr. Javad Doliskani

May 2020 – August 2020

- **Developed a library in Rust** for big numbers arithmetics, utilizing the parallel processing features of Rust.
- Library developed to aid and **improve the performance** of the SIKE Post Quantum Cryptography Algorithm.
- Applied theoretical concepts of Abstract Algebra & Finite Fields to further improve the efficiency of the library.

Systems Architect Intern

Mississauga, Ontario

TechSpan Industries Inc.

June 2019 – August 2019

- **Maximized warehouse efficiency** by creating a **C++ program to automatize** four Vertical Lift Machines.
- **Optimized** management of huge B2B online orders, as 350% performance increase.

Education

B.Eng - Computer Engineering | CS Minor, Toronto, ON

Ryerson University

Cumulative GPA of 4.08/4.33

Sept 2019 – Apr 2023 [Expected]

Projects

Numbers.City – C++17, PHP, MySQL

Site

- SMS Activation service for applications such as Steam, WhatsApp, & Telegram. **Achieved 87,000+ sales in just 3 years.**
- Created a C++ backend to control the SIM Gateway which interacts with the PHP web-backend.

Student Management System – C++20, Qt5, MongoCXX, Google Admin & Classroom SDK **Closed Source(Showcase Soon)**

- Developed a full fledged school management system, with complete GSuite and Google Classroom integration.
- Using C++20, Qt5 for GUI & Networking & Multi Threading, and MongoCXX Drive for NoSQL databasing.
- Licensed to a school with 300+ students, with more licensing opportunities to come.

KnockIO - Top 5 @ RU Hacks 2020 – C++11, ESP32, NodeJs

Demo - Devpost - GitHub

- Open source doorbell IOT video camera built on a ESP32 in C++. Web backend in NodeJs and frontend in Vue.

Chip8 Interpreter & Disassembler – C++11

GitHub - Showcase

- A Chip8 interpreter & disassembler written in modern C++

Leadership

Executive Technical Lead

Toronto, ON

Google DSC

Sept 2020 – Present

- Hosting by-weekly workshops in topics such as C++, Low Level Programming, & Data-structures and Algorithms.

Executive Systems Lead

Toronto, ON

Electrical & Computer Engineering Student Society

August 2020 – Present

- Developed and managed all of RECESS's server infrastructure. Also hosting workshops in software development.

Executive Lead Developer

Toronto, ON

RU Hacks

Aug 2020 – Present

- Developed a Discord Bot and lent out to events such as CUTC 2020, Space Apps NASA and Ryerson ENG & SCI Orientations.

Interests

- Love reading, relevant books: C++ Primer, CTCL, Operating Systems: 3 Easy Pieces & Secrets of Reversing Engineering.
- Interested in Mathematics, Operating Systems, Language Design, C++, Cryptography, and Reverse Engineering.
- I adore coffee! Anything from Espressos, Cortado to Siphon coffee.

