

Matthew Dibble

4A Computer Science & Business Dual Degree

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SKILLS

Languages	C, C++, Rust, Python, TypeScript, JavaScript, Java, PHP, Lua, HTML/CSS, SQL, Bash, VBA
Technologies	Node.js, Express, React, Redux, Postgres, MySQL, Mongo, Redis, JWT, OpenGL
Infrastructure	Docker, Kubernetes, Helm, AWS, Azure, Jenkins, Splunk, Linux, CMake, MSBuild, LLVM

EXPERIENCE

BlackBerry – Systems Software Developer Waterloo, ON / **Fall 2021**

- Developed a flexible framework for metric collection for an internal **Rust** library along with **C** bindings
- Designed and implemented a **REST API** that collects client IP details to be used by system administrators
- Enhanced threat-detection software by developing a metadata parser that aggregates crucial information
- Implemented support for **HTTP/2** in component of software allowing for a **15% decrease** in request times

Co-operators – Software Developer Waterloo, ON / **Winter 2021**

- Lead developer for several core **Node.js** backend services of an internal large-scale internal web-app
- Created an **API** using **Express.js** for aggregating users' session information and turning it into a PDF format
- Maintained production web-apps and internal **JavaScript** libraries, ensuring continued compatibility

FreshSpoke – Developer & Systems Analyst Innisfil, ON / **Summer 2020**

- Developed **frontend** for a modular, filterable analytics dashboard used by investors, administration, and clients
- Architected a scalable inventory management system from scratch, enabling high levels of automation
- Created an interim system for tracking inventory in Excel, writing **scripts** leading to a **50% faster** workflow

FreshSpoke – Logistics Coordinator Barrie, ON / **Summer 2019**

- Managed user experience overhaul project for two **iOS** and **Android** apps adhering to set requirements
- Standardized and documented a set of procedures designed for new clients of the platform to get started easily
- Researched and developed solutions to consolidate **backend** payment processing and evaluated subsequent results

PROJECTS

Nintendo Entertainment System (NES) Emulator – Rust, SDL2 – [Source](#)

- Cycle-accurate emulator of the *Nintendo Entertainment System* that takes advantage of **Rust**'s unique properties
- Degree of accuracy allows for play of *Super Mario Bros.*, *The Legend of Zelda*, *Donkey Kong*, and much more

Minecraft Clone – C++, OpenGL – [Source](#)

- Minecraft-style game built from the ground up with a proprietary, scalable **game engine** using **OpenGL**
- Includes **terrain generation** using a custom voxel system that generates and renders at a high level of efficiency

Flick – Movie Recommendation Service – Node.js, React, Postgres, Express, JWT – [Source](#)

- Full stack web-app that tailors movie suggestions for you or your friend group that **learns from your behaviour**
- Core developer for the **backend** that implements users and **authentication**, also architecting the service's APIs

CHIP-8 Interpreter w/ GUI and Debugger – C++, OpenGL – [Source](#)

- Multi-platform interpreter of the CHIP-8 instruction set that includes a large suite of **interactive** debugging tools
- Offloads rendering to the GPU using **OpenGL** as a backend to allow for **considerable performance gains**

EDUCATION

Wilfrid Laurier University – 11.13/12.00 GPA

Waterloo, ON / **Fall 2018 – Spring 2023**

- Candidate for Bachelor of Science in Computer Science (BSc)
- Candidate for Bachelor of Business Administration (BBA)