

# MATTHEW DIBBLE

[mdibble@rogers.com](mailto:mdibble@rogers.com) ♦ [matthewdibble.com](http://matthewdibble.com) ♦ [github.com/mdibble](https://github.com/mdibble)

## SKILLS

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

## EXPERIENCE

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<b>BlackBerry</b>	Fall 2021
Systems Software Developer	Waterloo, ON

- 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

<b>Co-operators</b>	Winter 2021
Software Developer	Waterloo, ON

- 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

<b>FreshSpoke</b>	Summer 2020
Developer & Systems Analyst	Barrie, ON

- 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

## PROJECTS

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<b>Nintendo Entertainment System (NES) Emulator</b> - Rust, SDL2	<a href="#">Source</a>
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- Cycle-accurate emulator of the *NES* that takes advantage of **Rust**'s unique properties
- Degree of accuracy allows for play of *Super Mario Bros.*, *The Legend of Zelda*, and much more

<b>Minecraft Clone</b> - C++, OpenGL	<a href="#">Source</a>
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- *Minecraft*-style game built from the ground up with a proprietary, scalable **game engine** using **OpenGL**
- Includes a voxel **terrain generation** system that generates and renders with **optimization** techniques

<b>Flick - Movie Recommendation Service</b> - Node.js, React, Postgres, Express, JWT	<a href="#">Source</a>
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- Full stack web-app that tailors movie suggestions for users that **learns from user behaviours** and patterns
- Core developer for the **backend** that implements users and **authentication**, also architecting the service's APIs

## EDUCATION

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Candidate for BSc in Computer Science, Wilfrid Laurier University	September 2018 - August 2023
Candidate for BBA, Wilfrid Laurier University	11.13/12.00 GPA