

Paolo Torres

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EDUCATION

University of Waterloo

Bachelor of Applied Science, Mechatronics Engineering

Waterloo, ON

Sep. 2016 – Jun. 2021

EXPERIENCE

Amazon

Software Development Engineer

Aug. 2021 – Present

Vancouver, BC

Amazon

Software Development Engineer Intern

May 2020 – Aug. 2020

Vancouver, BC

- Developed **software tools** for Amazon Freight to track and monitor the statuses of shipper invoices
- Incorporated sorting, pagination, and filtering of data, deployed to production for **thousands of users**
- Implemented Spring caching to **improve page load times** from 30s to <1s for all subsequent loads
- Worked with Java and Spring Framework in the backend, TypeScript and Angular in the frontend

Clearpath Robotics

Software Developer Intern

Sep. 2019 – Dec. 2019

Waterloo, ON

- Implemented firmware with DMX512 and sACN compatibility for control of embedded lighting system
- Interfaced with an STM32F407, created device drivers to support UDP transport and SPI conversion
- Developed and tested features for **autonomous ground vehicles** in C++, utilized ROS and CMake

Microsoft

Software Engineering Intern

Jan. 2019 – Apr. 2019

Redmond, WA

- Developed **C++20** library conformance features based on the C++ STL that ships with Visual Studio
- Libraries: algorithm, numeric, cmath, containers, type_traits, string, functional, memory, and new
- Optimized function's move constructor to **reduce object file size** by 30% for x86 and 45% for x64

Microsoft

Explore Intern

May 2018 – Aug. 2018

Redmond, WA

- Developed Visual Studio IDE and IntelliSense features in C++ and C#, shipped to **5 million users**
- Added **telemetry analytics** and full test coverage to track success metrics and increase robustness
- Utilized Git and Azure DevOps to track work, participated in sprint meetings, carried out sprint demos

FLIR Systems

Robotics Engineering Intern

Sep. 2017 – Dec. 2017

Waterloo, ON

- Generated fixes on sensors and MCUs to improve temperature reading and flight performance in C
- **Squashed 50+ bugs** in Jira and verified feature requests related to controls, computer vision, and UI
- Tested and validated memory management issues, firmware, connectivity, calibration, and custom APIs

Solink

Software Developer/QA Intern

Jan. 2017 – Apr. 2017

Ottawa, ON

- Built a central data source connector in JavaScript to manage 10,000+ POS device transactions a day
- Wrote camera-based and data extraction automation scripts via REST, **saving hours of work** a week
- Created software tools, patched numerous bugs, and tested the product via Scrum/Agile methodology

PROJECTS

Parameter Optimizer/Symbolic Regressor | C++

Apr. 2021

- Implemented a **genetic algorithm** for optimization and genetic programming for regression problems
- Incorporated crossover/mutation operators to evolve across generations and achieve optimal solutions

Pathfinding Maze Solver | C++

Dec. 2020

- Utilized **A* search algorithm** with distance heuristic to visualize and optimally solve complex mazes
- Outperformed generic search algorithms by processing significantly less nodes resulting in shorter paths

SKILLS

Languages/Tech: Java, JavaScript, HTML/CSS, npm, Node.js, C/C++, C#, XAML, .NET, Python

Libraries/Frameworks: Spring Framework, Angular, C++ STL, libc++, Clang, LLVM, WPF, jQuery

Tools: Git, IntelliJ, Terminal, AWS, Visual Studio, Linux, Jira, ROS, CMake, cmd, Azure DevOps