Marc Mailhot

Student Developer - University of Waterloo Computer Science

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Experience

Tsuru Capital Developer Intern, Sept 2018 - Dec 2018

- Researched and implemented high-performance, low-latency trading strategies in Haskell
- Improved the accuracy of an internal trading simulator

Jane Street Developer Intern, Jan 2018 - Apr 2018

- Improved internal change management tooling to better track intra-repo dependencies using build artifacts
- Developed an instruction set simulator for a RISC CPU architecture and integrated it with FPGA simulation tools

Apple Inc. Platform Architecture Intern, May 2017 - August 2017

- Contributed to the development of a high-performance, circuit level, hardware simulation compiler
- Designed and developed performance monitoring infrastructure to track compiler performance

Jane Street Europe Developer Intern, Sept 2016 - Dec 2016

- Designed and developed a type inference and schema generation system to build queryable Postgres databases from untyped s-expressions
- Wrote performance-sensitive OCaml code handling and processing high volume message streams
- Rewrote distributed data analysis to use an efficient binary data format, resulting in 10x performance improvements

Kik Interactive Web Developer (Co-op), Jan 2016 - Apr 2016

- Optimized a high volume messaging system in Python, leading to a 25% drop in request latency
- Designed, wrote and documented an open source Python SDK for our API platform

Kik Interactive Web Developer (Co-op), Apr 2015 - Aug 2015

Projects

Flappy Goose 2017

- Gameboy Advance game written entirely in Rust
- Developed a convenient set of Rust macros for specifying, reading, and writing memory-mapped IO registers

Dayder 2016

- Web-app for quickly finding spurious correlations among 390,000 datasets
- Developed a Rust backend efficiently finding correlations using a custom binary time series data protocol
- Designed and wrote CSS for the front-end design

Femto Chat 2016

- Built a prototype IRC Client in D in one weekend
- Developed a highly optimized IRC serialization and deserialization code using D templates

Education

University of Waterloo Candidate for Bachelor of Computer Science, Sept 2014 - Present

- 4.0 Cumulative GPA
- 100% grade in two advanced level CS courses

About

Backend-focused full stack developer, with a special interest in programming languages, functional programming, compilers, systems architecture, distributed systems and natural language processing.

Skills

Languages

OCaml, Haskell, Python, C++, Rust, Clojure, HTML5, C, Nix, CSS, SASS, C#, Racket