

Alex Foley

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Experience

Jane Street Capital

Waterloo, Ontario (Remote)

Software Engineering Intern

June 2020 - August 2020

- Created an [open-source plugin API](#) on top of [VCaml](#) to improve developer workflow and abstract common patterns when creating neovim plugins in OCaml
- Built a [neovim plugin](#) in OCaml for switching between interface and implementation files, allowing users to move forward/backward in the list of relevant files or select their desired file in fzf
- Discovered a [race condition in neovim](#) which resulted in RPC messages to stay on the wire and could cause existing neovim plugins to hang, regardless of the language in which the plugin was written

Google - Gmail Dynamic Email

Waterloo, Ontario

Software Engineering Intern

May 2019 - August 2019

- Designed and built Java WebDriver tests and monitoring for Docs' dynamic emails, catching two major regressions before production
- Added internal logging and monitoring to triage AMP validation failures affecting over 500000 emails
- Designed and built a tool to help developers debug dynamic email issues affecting 15% of all dynamic emails, improving developer experience and cutting down previously manual outreach

Microsoft - Teams

Redmond, Washington

Software Engineering Intern

August 2018 - December 2018

- Built-out new communications architecture to support multi-window capabilities in Teams, decreasing bytes over wire by 92%
- Wrote GraphQL resolvers in TypeScript to handle requests routed through the new architecture
- Designed and built-out flighting solution for new architecture, allowing requests to be routed through new and old communication paths with high configurability

Wish - Tracking

San Francisco, California

Software Engineering Intern

January 2018 - April 2018

- Created Python crons and internal tools to automate merchant notification processes, increasing the number of trackable packages on Wish by 10%
- Integrated new tracking source into Wish platform, cutting tracking costs by up to 80% per package
- Shortened the time it took to update packages' statuses from 4 hours to 45 minutes by splitting long-running jobs into short jobs which could be run in parallel
- Won internal 13-hour hackathon by automating the approval of 36% of tracking disputes, reducing the cost of manual labour

Projects

vm

Waterloo, Ontario

CS 246E Final Project

November 2017

- Created a functional clone of the text-editor vim in C++, including: vertical splits, macros, and syntax highlighting with multiple colour schemes
- Used common idioms such as RAI and design patterns to write extensible, object-oriented code which avoided manual memory management

Sandwich-o-matic

Peterborough, Ontario

ECHacks 2016 - Best Hardware Hack

November 2016

- Created an automated IOT sandwich-maker with voice control, in 36 hours
- Users could say "make me a sandwich with [toppings]" and the machine toasted the bread, dispensed the toppings, and made the requested sandwich
- Created the embedded software (Photon/Arduino) to process requests and facilitate servo/motor movements to make the sandwich
- Featured by [Arduino](#), [Gadgetify](#), and [Hackaday](#)

Education

University of Waterloo

Waterloo, Ontario

Bachelor of Computer Science (Co-op) - 93% Cumulative Average

September 2016 - April 2021

Awards/Achievements

2020 **Member**, University of Waterloo Rocket League B Team

Waterloo, Ontario

2016-2020 **Member**, University of Waterloo Table Tennis A Team

Waterloo, Ontario

2017, 2019 **1st/15 Teams**, Google Games Waterloo

Waterloo, Ontario