

TL;DR

- Modernized Auto-Reply in Yahoo! Mail. [Work was featured by TechCrunch.](#)
- Redesigned key microservices at Kik to reduce timeouts and handle 5x increase in traffic.
- Practical understanding of embedded systems and real-time programming obtained through building a real-time microkernel from scratch in [CS 452](#) (Real-Time Programming, aka "Trains").
- Received an "Outstanding" evaluation on every work term.

Serious Stuff

Undergraduate Research Assistant @ University of Waterloo

Sep. 2018 - now

- Evaluating the performance of random, greedy and holistic chunk placement strategies in the presence of failures and designing a fault-tolerance model for the [EC-Store cloud storage system](#).

Frontend Developer (Intern) @ Yahoo!

Jan. 2018 - Apr. 2018

"...Though this was a lot of additional work, he did it all with a smile."

Sunnyvale, California

- Migrated most of Yahoo Mail's settings pages from plain Redux to Yahoo's in-house [Action Syncer architecture](#), which greatly accelerated the development of offline capabilities for the entire Mail platform.
- Designed a system to allow a React component to capture an arbitrary element's scroll event, enabling developers to better implement a consistent and intuitive user experience.
- Implemented a new flow for the vacation response settings page and added the ability to add images, GIFs and emojis to automatic replies. This was featured in a [TechCrunch article](#).

Backend Developer (Intern) @ Kik

Jan. 2017 - Apr. 2017

"Ben has undoubtedly excelled at the role he played within our organization." Waterloo, Ontario

- Took ownership of a key microservice and optimized code base to handle a 5x increase in traffic.
- Designed and implemented two additional microservices that directly align with Kik's focus of creating a safer community.
- Reimplemented core moderation logic using task queues, which vastly reduced server timeouts.
- Rebuilt an internal metrics system to triple the amount of information available.
- Introduced Firebase to [dev.kik.com](#) to replace the deprecated Google Channel API with engineers from Firebase.

QA Software Engineer (Intern) @ 500px

May. 2016 - Aug. 2016

"Ben is a student who takes his work very seriously."

Toronto, Ontario

- Fixed critical bugs in the automation system; eliminated frequent inconsistencies in testing.
- Updated and expanded deprecated Continuous Integration (CI) tests using Rspec and Selenium.
- Implemented a Slack notification system to report build statuses to developers.
- Developed a tool to catch unexpected UI changes based on screenshots.
- Designed an automated system to keep track of flaky specs in the CI test suite.

Languages & Frameworks

 Experienced	 So-so	 Novice
 C	 Javascript	
 React	 Redux	
 Node.js	 ARM asm	
 C++	 Python	
 OCaml	 Docker	
 PHP	 SQL	
 Java	 Bash	
 Go	 Nix	

Not-So-Serious Stuff

[Vocode \(Hackathon Project\)](#)

- 100% voice-enabled, JavaScript-based text editor. Powered by Nuance's Natural Language Understanding API.
- First place winner of the Nuance API prize at McHacks 2016.

[\(H\)open Source \(Hackathon Project\)](#)

- Platform to connect non-profit organizations with volunteer software engineers.
- Won the Moxtra API prize at HackTheNorth 2015.

[Waterloo Warriors Band \(non-techy, ongoing\)](#)

- Lead trumpeter
- Deputy Chief Centurion (Vice-president) and Technomancer (Webmaster)