

TL;DR

- Received an "Outstanding" (highest) evaluation on University of Waterloo's coop system during all 5 work terms.
- Able to quickly adapt to and thrive in different work environments through experiences at companies of all sizes.
- 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").

Serious Stuff

Software Engineer (Intern) @ Apple Inc.

May 2019 - Aug. 2019

"He is a self motivated, focused engineer who strives to look at problems in depth..."

Cupertino, California

- Implemented network bandwidth prediction infrastructure and bandwidth recording optimizations that improved the time to reach HD and UHD tiers by over 30% in Apple's HTTP Live Streaming video player.
- Created a Media Source Extensions conformance suite to streamline the certification process for external hardware.

Software Engineer (Intern) @ Hive.AI

Jan. 2019 - Apr. 2019

"Ben is the best intern we have ever had on our team and one of the strongest engineers at the company."

San Francisco, California

- Rewrote a data export pipeline and over 50x'd the speed for large exports by making use of idle resources and optimizing caching and concurrency.
- Invented a polygon consensus algorithm using vertex-voting and multi-density clustering techniques. This algorithm landed the company multiple large-scale projects.
- Implemented a Node.JS Streams library with batching, bucketing and concurrency control capabilities.

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.

Languages & Frameworks

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

Not-So-Serious Stuff

[Free Sidecar](#)

- Enables Sidecar on Unsupported iPads and Macs running iPadOS 13 and macOS Catalina.
- Received 500+ stars and 22K downloads on GitHub.

[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.

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

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