

# Andrew Leung

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## EDUCATION

**B.S. Computer Science**, GPA: 3.912/4.0

Sep 2017 – May 2022

*Northeastern University, Khoury College of Computer Sciences*

*Boston, MA*

## SKILLS

**Programming Languages:** TypeScript, JavaScript, Java, Python, Racket, Scala, OCaml

**Technologies:** React, React Query, Redux, Express.js, Fastify, Jest, NGINX

**Databases:** PostgreSQL, MongoDB

## WORK EXPERIENCE

### Poloniex

Jan 2021 – Aug 2021

*Software Engineer Co-op*

*Remote*

- Maintained full-stack internal web applications using PHP, TypeScript, Java, and React
- Automated delivery of web marketing material using a content management system, saving engineering time spent manually updating 14-18 instances of material per month
- Created API actions and automations enabling support engineers to process hundreds of customer tickets per day
- Improved developer experience for a Node.js permissions service by creating useful abstractions for rule composition, streamlining testing patterns in Jest, and contributing to underlying open source rules engine

### Sandbox at Northeastern University

Sep 2020 – May 2021

*Software Developer*

*Remote*

- Developed features for a full-stack university course planning web application
- Modeled course schedule data in TypeScript, wrote logic for validating course requirements, and implemented React components to display interactive course plans to users
- Wrote a script to parse university course documentation into a JSON schema using Node.js
- Provided technical mentoring to teammates through routine pair-programming on tasks

### Teikametrics

Jan 2020 – Aug 2020

*Software Engineer Co-op*

*Boston, MA*

- Demonstrated technical growth starting with no Scala, TypeScript, or web development experience to becoming an active contributor to a Scala with Cats backend and a TypeScript with React/Redux frontend
- Interacted with designers to build front-end components, user flows, and interactions using React, HTML, and CSS
- Surfaced Scala APIs with Slick, one of which has been used to persist nearly 4 million unique database entries
- Developed and augmented CSV bulk upload features used by internal analysts and external users 12 times per day

## PROJECTS

### Compiler for Python-like Language OCaml, C, x86 Assembly

2022

*Closed Source*

- Wrote a compiler backend in OCaml and a C runtime for a Python-like expression-oriented language
- Supported dynamically-typed values including numbers, Booleans, tuples, strings, and first-class functions
- Managed program memory with mark-and-sweep garbage collection and register allocation
- Wrote over 600 unit tests and end-to-end tests to ensure correctness of compilation using OUnit

### Random Audio Player TypeScript, Node.js, Fastify, React, React Query, TailwindCSS, NGINX

2022

*github.com/andrewjleung/raudi*

- Created a full-stack web application to quickly demo and download random sounds fetched from the Freesound API, featuring cookie-based session management and a custom HTML5 audio player

### TheNeedleDrop Review Dataset TypeScript, Node.js, YouTube Data API, PubSubHubbub

2022

*github.com/andrewjleung/fantano-reviews*

- Implemented a Node.js script to parse metadata from the YouTube Data API and generate a CSV dataset containing all of popular music critic TheNeedleDrop's video music reviews
- Automated updates to a live hosted dataset on GitHub using Fastify and PubSubHubBub