Kai Ferrall

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EDUCATION

Queen's University — BASc. Applied Mathematics and Computer Engineering

2017 - 2022 (1 year internship)

Engineering Society Software Development Team — Team Lead
EngLinks — Engineering Tutor
Relevant Course Work
Data Structures, Digital & Embedded Systems, Control Theory, Signal & Systems Theory, Calculus 3, Computer Architecture, Probability 1 & 2, Linear Algebra 1 & 2, OOP for engineers.

EXPERIENCE

ecobee Inc. — Software Engineer Intern

May 2020 - present

Working with & managing internal stakeholders to automate and optimize business systems.
Developed drop-ship data pipeline with Google Cloud, MySQL and various SFTP services, **saving ~$50,000/yr**.
Architecting and creating various distributed pipelines to handle customer order validations, reducing error costs.

Pitch Development — Full Stack Developer

May 2019 - 09/19

Worked directly with designers and clients, gained great professional communication/collaboration experience.
Developed RESTful media microservice, utilized across 3 applications to handle images and video.
Created user cache service with Redis and Node.js, on average **saving 176ms per authenticated request**.

Acoutera Inc. — Frontend Developer

May 2018 - 09/18

Developing generalized React.js components for flexible use across application.
Implementing UX features, and UI features from Figma.

PROJECTS & CLIENT WORK

Sexual Assault Centre App, Android App

2017/2018

In a team of 4, designed and developed an Android app for the Sexual Assault Centre of Kingston.
Java, Android Studios, XML

HeadtoHead.ca, CMS Subscription Platform

2019

Developed backend as a REST API which integrated with Stripe to create user subscription system.
Worked with client and designers to create UI/UX features for React.js frontend.
Application has been **live with subscribers for 1.5 years**.
Express, React + Redux, MongoDB, Stripe API
private github   live application

Feedback, Live Feedback Web App

2017/2018

Developed anonymous live feedback platform, to allow professors to garner feedback from students more easily.
Used Charts.js to display live data results, and created custom form generation system with React.js.
With **natural language processing on comments**, classified them as positive or negative feedback.
Express, React + Redux, MongoDB
github   live application

SKILLS

Languages — Python 3, Node.js, JavaScript, Java, C, HTML5, CSS3
Frameworks & Libraries — React.js, Redux, Express, Flask, JQuery
Tools/Other — Google Cloud Platform, git, MongoDB & MySQL, API creation/integration, networking & HTTP, Redis