Kai Ferrall

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SKILLS

Languages — Python 3, Node.js, JavaScript/HTML5/CSS3, Java, C
Frameworks/Libraries — Express, React, Redux, OpenCV, NumPy, pandas, jQuery, Junit
Tools/Other — Google Cloud Platform, MongoDB & MySQL, API creation/integration, networking & HTTP, Redis, regex

EXPERIENCE

ecobee — Software Engineer Intern   *05/20 - present*
Working with internal stakeholders to build and optimize business systems.
Developed drop-ship data pipeline with Google Cloud and various SFTP services, **saving $50,000/yr**.

Pitch Development — Full Stack Developer   *05/19 - 09/19*
Worked directly with designers and clients, gained great professional communication/collaboration experience.
Developed generalized media microservice, saving **~ 40 hours** of manual work.
Created cache service with Redis, on average **saving 176ms per authenticated request**.

Acoutera — Frontend Developer   *05/18 - 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

Viral Disease Model, Opinion Dynamics Model   *2018*
In a team of 4 developed a GUI and model, simulating agent movement and viral disease infection.
Agent infectivity modelled with opinion dynamics.
Web scraped 10 year historical data to test model accuracy.
MATLAB, Python, Matplotlib, pandas

source

HeadtoHead.ca, CMS Subscription Platform   *2019*
Developed **full admin and user authentication system** along with subscription platform using Stripe API.
Application has been **live with subscribers for 1.5 years**.
Express, React + Redux, MongoDB, Stripe API

private github   live application

Feedback, Web App   *2017/2018*
Developed anonymous live feedback platform, to allow my professors to garner feedback more easily.
Included live poll results and graphics, unique code for form that closes after set time period.
Used **natural language processing on comments**, to classify as positive or negative.
Express, React + Redux, MongoDB

github   live application

EDUCATION

Queen's University — BASc. Applied Mathematics and Computer Engineering (3.1 GPA)   2017 - 2022 (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.