

# Martin Au-Yeung

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## EDUCATION

### University of British Columbia

Expected Graduation: May 2023

BSc. Combined Major in Computer Science, Life Sciences, Earth & Ocean Sciences – Biology major student before 2020

## SKILLS

**Languages:** Go (Golang), TypeScript, JavaScript, Python, Java, C++, C, SQL, Dart, Ruby, HTML, CSS

**Frameworks & Libraries:** React, Node.js (Express, Passport, TypeORM), Flutter, Next.js, Swing, Tailwind

**Tools/Tech:** Git, Linux, Heroku, Firebase, GCP (Compute Engine, NLP, Cloud Functions), AWS (EC2, Redshift), Docker

## EXPERIENCE

### BlackBerry

September 2021 – Present

Software Engineer Intern

Remote – Waterloo, Ontario, CAN

- Constructing new backend system for cloud infrastructure console application from Ruby using Go (Golang)
- Designed and implemented cluster reports microservices in Go with algorithmic and data structural changes to improve performance over Ruby version by 20% (- 100ms). Wrote over 1.7k+ lines of code for the features in 3 weeks
- Participated in code reviews with other engineers and wrote design documentation for owned microservices

### Hölmetrics

May 2021 – August 2021

Software Engineer Intern

Remote – Calgary, Alberta, CAN

- Constructed from scratch, improvement of company's flagship product using React, Node.js and SQL, 50% of the scoped time and deployed to customers on EC2 to eliminate 3<sup>rd</sup> party company costs (\$70 per client to \$0)
- Architected SSO authentication system with JIT provisioning and created REST API endpoints in Axios to handle authentication requests, reducing user login time by 300% (15 sec to 5 sec) and customer onboarding time by 100%
- Developed question limit and progress tracking features for React and SQL wellness app to first major customers within my 1<sup>st</sup> week of starting, achieved by maintaining a swift development pace and without working overtime
- Went beyond intern responsibilities by facilitating hiring for full-time software engineers, trusted by managers to generate challenging technical questions to screen and express hiring recommendations for 2 final-round candidates

### UBC Science Undergraduate Society

July 2020 – April 2021

Web Developer

Remote - Vancouver, British Columbia, CAN

- Ideated and led redesign of Society's webpage UI and UX for better accessibility to 8300+ UBC Science students
- Went beyond role to lead a React framework transition that decreased site loading times by 500% (10 sec to 2 sec)
- Optimized Security Headers in PHP and migrated site to HTTPS to increase overall site security grade from a D to a B

## PERSONAL PROJECTS

### hubble

Top 3 Best in Show Project @ Google Cloud Demo Week • Google Cloud COVID-19 Hackathon Fund (\$5000 & Mentor)

- Led team of 5 in developing a full-stack, social connection app for Android and iOS, 10 months after starting CS major
- Designed and constructed a serverless data scoring algorithm to suggest compatible friends using NLP entity analysis
- Ideated UI on Figma and built over 90% of the front-end application with friend connection and messaging system
- Applied data caching solutions discussed with Google Software Engineer mentor to save GCP usage costs by 200%
- Live Demo to Google: <https://youtu.be/-GaKWMUCaaM?t=4511> Event Link: <https://goo.gle/GoogleCloudDemoWeek>

### ML-based Predictive Modeling of COVID-19 Vaccination Uptake

Hoffmann-La Roche Infodemic Research Solution Awards – 3<sup>rd</sup> Prize (\$400) • Top 15 Finalist out of 150+ teams

- Collaborated in a team of 4 to create an ML research paper to help with COVID-19 for the 2021 Big Data Challenge
- Implemented XGBoost ML algorithm in Python to predict COVID-19 vaccination uptake with 62% test accuracy
- Generated choropleths in Python to highlight US counties with abnormally low vaccination rates and identified the top 10 key sociodemographic factors out of 70+ that drive personal decisions to receive the COVID-19 vaccine
- Pre-published manuscript in scientific journal ([doi.org/10.2196/preprints.33231](https://doi.org/10.2196/preprints.33231)), led writing of methods and results

### Statstify

- Created an interactive CRUD React web-app to present Spotify users listening statistics to peak 120 monthly users
- Devised and developed an individualized recommendation algorithm to suggest “throwback” songs to users

### PaymentPal

- Created an ATM simulator in Java and Swing following the MVC design pattern. Achieved 100% test coverage in JUnit