**Martin Au-Yeung**

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**EDUCATION**

**University of British Col****umbia** **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 50% (- 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 3rd 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 1st 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 – 3rd 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 59% 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](http://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