Stanley Cheung

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Education

The University of British Columbia | **GPA: 4.20/4.33** September 2022 – May 2027
B.Sc, Major in Computer Science *Vancouver, BC*

- **Courses**: Machine Learning, Computer Networking, Relational Databases, Algorithms & Data Structures, Computer Systems & Hardware, Object-Oriented Programming
- **Awards:** 2023–2024 Charles & Jane Banks Scholarship, 2022–2023 UBC Science Scholar (standing of 90%+) & Dean's List

Experience

Software Engineer Intern | TypeScript, Express.js, PostgreSQL, AWS, React January 2024 – July 2024
VoltSafe Inc. *Vancouver, BC*

- Designed and implemented an end-to-end roles-based access control system with an Express.js, PostgreSQL, and AWS Cognito backend, ensuring controlled access to the internal admin dashboard.
- Developed and Dockerized a server monitoring system using React, Express, and Prometheus, enabling real-time collection and analysis of CPU, RAM, and disk metrics across 7+ EC2 web and database servers.
- Developed an image and document storage system with a RESTful API for the marina management app, leveraging AWS S3 to optimize performance and reduce bandwidth costs, enabling users to upload, storage, and retrieve documents and images.
- Conducted a performance analysis of the marina management app using Chrome Lighthouse, reducing total app bundle size by 22% by pruning unused static assets, leading to improved load times.

AP Computer Science Instructor October 2022 – February 2023
iSmart Education Canada *Vancouver, BC*

- Designed and taught weekly CS lessons on algorithms, data structures, and Java programming.
- Generated $3000+ revenue for the company part-time.
- Exceeded expectations by supporting students, some still in primary school, in achieving 5/5 on the AP CSA 2023 exam.

Technical Projects

Pathfinding Visualizer 🔗 | TypeScript, React, HTML5 Canvas June 2025

- Built a web app for visualizing pathfinding algorithms (Dijkstra's, A*, and DFS) and random maze-generation algorithms.
- Reduced animation time by 30% (35,000 ms to 25,000 ms) by using `React.memo` and `useCallback`, cutting unnecessary renders from 115,000 to 16,000 (86% reduction).
- Refactored React DOM-based rendering to HTML5 Canvas, achieving 8-10x performance improvement (7 FPS to 60+ FPS) through `requestAnimationFrame` animation loops and elimination of React re-render overhead.
- Set up a Continuous Deployment pipeline using GitHub Actions to automate deployment when pushed to main branch.

Eat n' Log 🔗 | React Native, Redux, Figma June 2023 – October 2023

- Worked with a multidisciplinary team of 15 to develop an IOS mobile app, enabling food lovers to seamlessly document and share their favourite dishes and dining experiences.
- Developed five core frontend features using React Native with Redux for state management: search bar, tag filtering, home screen, authentication flow, and editable user entry pages.

Technical Skills & Certifications

Languages: TypeScript, JavaScript, Python, SQL, R, Java, C
Frameworks: React, Express.js
Other: Node.js, PostgreSQL, Docker, Git, AWS, RESTful APIs, Sequelize ORM, Linux, Prompt Engineering
Certifications: AWS Certified Cloud Practitioner