

# STANLEY CHEUNG

Major in Computer Science, Year 3

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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, GitHub Actions, React

August 2024

- Built a web app for visualizing pathfinding algorithms like Dijkstra's, A\*, and DFS.
- Implemented the recursive backtracking algorithm to generate random mazes inside the visualizer.
- Enhanced the app's responsiveness by dynamically calculating grid dimensions based on screen size.
- Set up a Continuous Deployment pipeline using GitHub Actions to automate deployment.

**Image Compression Tool** | C++

July 2023

- Built an image compression program in C++ that can process images up to 5 million pixels.
- Implemented a recursive traversal function to prune subtrees within a user-determined tolerance threshold, enabling compression at different intensities.
- Leveraged dynamic programming to calculate average HSLA pixel values in  $O(1)$  time instead of  $O(n)$ .

**TwoChess**  | Java, JUnit, Swing

April 2023

- Created a two-player chess game using the Model-View-Controller (MVC) design pattern.
- Wrote a full-fledged suite of unit tests with JUnit resulting in 100% code coverage.
- Implemented local storage using JSON, allowing users to save and resume past matches.

**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, Prometheus, Jira

**Certifications:** AWS Certified Cloud Practitioner