Alan Zhou

alanzhou.me
linkedin.com/in/therealalan

alanzhou318@gmail.com
+1-672-513-3627
github.com/alantensor

Education

- **University of British Columbia** — Vancouver, BC
  Major in Computer Science; GPA: 4.10
  - **Courses**: Software Construction, Systematic Program Design, Models of Computation
  - **Activities**: Competitive Programming Team (ACM ICPC); Film Society; Intramurals

Skills

- **Languages**: C++, Golang, JavaScript, TypeScript, Python, Kotlin, Java, OCaml, HTML/CSS
- **Frameworks and Tools**: Node.js, GraphQL, Express.js, React, PostgreSQL, Git, AWS, Docker, OpenGL

Experience

- **Littledrop** — Vancouver, BC
  Backend Developer — *May 2023 - Sept 2023*
  - Developed and maintained RESTful APIs using **Node.js and Express.js**, enhancing the functionality of web applications and improving **API response times by 25%**
  - Implemented authentication and authorization mechanisms using **JWT and OAuth2**, enhancing security for user data

- **Blender Foundation** — Vancouver, BC
  Open Source Developer — *Jan 2024 - Present*
  - Identified and resolved **software bugs** to ensure the reliability and performance of the **Flamenco** distributed rendering system in **Go and Python**
  - Coordinated with teams to streamline the development workflow, leveraging **Gitea** for version control and **Buildbot** for CI processes

Projects

- **PrettyGrader** — *Sep 2023*
  - Developed a **Chrome extension** using HTML, CSS, and JavaScript that revamped the default UI of the autograder for my CPSC 110 class, used by over **800 students**
  - Improved readability by implementing a **clean design**, and added extra features such as **syntax highlighting** and improved dashboard navigation

- **Euler Fluid Simulation** — *Jun 2023*
  - Developed a robust Fluid Dynamics Simulator using **C++** and the **Simple and Fast Multimedia Library** to explore fluid flow phenomena
  - Implemented custom density and velocity solvers and **optimized algorithms** for computing the evolution of velocity fields

- **3D Polygon Renderer** — *Sep 2023*
  - Created 3D pipeline from scratch using JavaScript and HTML canvas to **render polygons** through a moving camera using **perspective projection** and linear algebra.

- **UBC Talks** — *Sep 2023*
  - Developed a course-specific discussion platform using **Typescript**, with a **Next.js frontend and serverless backend**, aimed at facilitating communication and collaboration among UBC students