

Alan To

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TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, C, R, Erlang, SQL (Postgres MySQL, SQLite), HTML, CSS, Assembly

Frameworks/Libraries: React.js, Next.js, Node.js, Junit, Django

Tools/Technologies: Git, Docker, Postman, Bash, RESTful APIs, Ubuntu/Linux, VSCode, JSON

EDUCATION

University of Washington

Sept. 2022 – June 2025

Bachelor of Science in Computer Science and Minor in Mathematics

- **GPA:** 3.86 | **Honors:** Dean's List (Spring 2023, Winter 2024, Autumn 2024)
- **Relevant coursework:** Algorithms, Data Structures, Software Development and Quality Assurance, Database System Design, Game Development, Web Development, Cryptography, Statistics

Green River College

Sept. 2020 – June 2022

- **GPA:** 3.86 | **High Honors Distinction**
- **Relevant coursework:** Intro to Programming, Object-Oriented Programming, Intro to Cybersecurity, IT Essentials

Certifications: Google Cybersecurity Specialization, CompTIA Security+ (In Progress – Expected 2026)

EXPERIENCE

Happy Lemon | Bubble Tea Shop

Bellingham, WA

Manager

Sept. 2022 – Jan. 2023

- Enhanced customer satisfaction and team collaboration through clear interpersonal communication, reducing order errors.
- Trained and mentored **10+** new employees, improving onboarding speed and team efficiency by **25%**.
- Delivered and managed boxes of supply orders, streamlining inventory organization and reducing restock time by **20%**.

PROJECTS

Survivor Game | *JavaScript, HTML, CSS*

- Achieved **top 3** games among **20+** teams through effective collaboration with a team of 4 developers in competition.
- Developed an engaging top-down rogue-like action game with boss AI (4 types), enemy AI (20 variations), player abilities, and procedural spawn-system.
- Improved frame rate stability and reduced gameplay bugs by **30%** through engine optimization, balanced mechanics, repeated play-testing, and refined UI design.
- Led team in an **Agile** 10-week sprint, conducting code reviews, weekly user stories, and task deadlines.

Marvel Trivia Maze | *Java, Java Swing, SQLite, Git, JUnit*

- Launched a fully functional Marvel trivia-based maze game in 7 weeks, engaging **30+** play-testers and meeting all sprint deadlines with a 3-person team.
- Implemented save/load functionality using serialization, increasing player session continuity by **100%** and reducing restart time by **50%**.
- Increased code reliability through rigorous unit testing, mock objects, and automated style checks using check style.

Game of Craps | *Java, Java Swing*

- Independently developed a fully functional casino-style desktop application with betting and scoring logic, implementing MVC and Singleton design patterns to ensure modular and scalable code.
- Built a Java Swing UI integrated with backend game logic for a complete playable experience.

Bookstore Web Application | *Next.js, Node.js, HTML, Docker, Postman, CSS, TypeScript, PostgreSQL, React*

- Engineered a full-stack library application enabling book search, book adding, and browsing for **9400+** entries, integrating a third-party API.
- Designed and implemented a **React-based frontend** with pagination, filtering, and user-friendly navigation for an intuitive browsing experience while reducing page load times by **38%**.
- Built and tested RESTful API endpoints (GET, POST, PUT, DELETE) with Postman to ensure backend reliability.

Movie Web Application | *React, JavaScript, MySQL, HTML, CSS*

- Developed a responsive movie search platform with user registration, leveraging **backend development** in MySQL and a clean **relational database** architecture to support efficient queries.
- Created and managed **MySQL** schemas and queries; integrating backend with frontend **React** components.
- Optimized SQL queries and indexing, improving database query performance and reducing average page load time by **25%**.