ALEX LI

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RELEVANT SKILLS

- **Programming Languages:** Python, C/C++, assembly, Java, JavaScript, TypeScript, Verilog, SQL, HTML, CSS
- **Frameworks/Libraries:** Flask, Express, Node, React, PyTorch, NumPy, Matplotlib, pandas
- **Technologies:** Linux, Git, CMake, SQLite, MariaDB, FPGA, Google Cloud Platform
- Writing descriptive, industry-level documentation, developing full-stack applications using iterative design principles, and collaborating in fast-paced environments under strict time constraints.

EDUCATION

University of Washington, Seattle, Washington — Expected June 2027
B.S., Computer Science — GPA: 3.7

Relevant Coursework: Discrete Mathematics, Software Design and Implementation, Linear Algebra, Data Structures and Parallelism, Hardware/Software Interface, Systems Programming, Digital Circuit Design, Machine Learning, Distributed Systems (Spring 2025), Data Management (Spring 2025)
Awards/Achievements: 1st Place (Synergy Track) at DubHacks 2023, **1st Place** (Best Web App) at HackTJ 10.0, Dean's List (Academic year 2023-24)

RELEVANT EXPERIENCE

Chewy, Inc. — June 2025—Aug. 2025
Software Engineering Intern

- Incoming Software Engineering Intern

UW Sensor Systems Lab | *FPGAs, Verilog, Python* — Dec. 2024—Present
Undergraduate Research Assistant

- Develop software to control FPGA signalling for hardware interfacing in applications for acoustic levitation
- Write code to serialize and de-serialize phase angle data, synchronizing hundreds of transducers to levitate objects in mid-air
- Migrate transmission protocol from I2C to UART, leading to increased signal fidelity and ease of connectivity

WEX, Inc. | *Google Cloud Platform, Google APIs, Flask, REST API* — Sept. 2022—May 2023
Software Engineer Intern

- Built an internal chat-bot to streamline meeting scheduling using Google Chat and Google Calendar REST APIs
- Documented code following best practices for implemented features, streamlining maintenance and future development efforts
- Deployed application on Google Cloud's App Engine for real time data processing and interactivity

George Mason University | *PyTorch, NumPy, Matplotlib, pandas* — July 2022—Aug. 2022
Deep Learning Research Intern

- Empirically investigated a novel machine learning optimizer, Sharpness Aware Minimization
- Implemented the Sharpness Aware Minimization and Stochastic Gradient Descent optimizers and trained/tested models on the CIFAR-10 image classification data set
- Published abstract in George Mason's student research journal

PROJECTS

Conscious Capital | *Flask, HTML, CSS, NumPy, pandas*
Project Github: `https://github.com/AlexXLi12/ConsciousCapital`

- Developed Conscious Capital, a web app that constructs personalized stock portfolios based on sector preferences, companies' social values, and risk tolerance.
- Collaborated with three teammates to deliver MVP in a 24-hour time frame, iterating on features and designing multiple times.
- Won the Best Web App Award out of almost **50** teams in the category at HackTJ 10.0, Thomas Jefferson High School's annual hackathon.

333gle | *C/C++, Networking*

- Built a **multithreaded** HTTP server from scratch in C++ using sockets, threads, and file I/O.
- Handled concurrent static file serving and search queries via a custom-built query processor with minimal latency.
- Optimized query performance by implementing memory-safe data structures in C to index and cache file metadata.