

Bian Lee

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EDUCATION

University of California, Davis

Davis, CA

*Bachelor of Science in **Computer Science**, Bachelor of Arts in **Economics***

Sep 2022 – Jun 2026

- Object-Oriented Programming (C++), Data Structures & Algorithms, Computer Architecture, Programming Languages, Algorithm Design & Analysis, Machine-Dependent Programming (x86), Computer Networks, Linux, Databases, Human-Computer Interaction, Computational Social Science, Transportation Systems, Discrete/Abstract Math

EXPERIENCE

Amazon

Jan 2025 – Apr 2025

Incoming Software Development Engineer Intern

Bellevue, WA

Fidelity Investments

Jun 2024 – Aug 2024

Software Engineer Intern

Merrimack, NH

- Implemented parsing and calculation logic for intraday account balances in **Spring Boot** with **90% JUnit test coverage** and **refactored codebase to reduce Sonarlint complexity score** to below threshold (49 to 15) to improve readability
- Configured performance testing suites for 2 brokerage service APIs to measure TPS, response time, and resource usage across 10+ AWS EKS pods under multi-threaded scenarios, with Datadog dashboard & Akamai CloudTest integration
- Ran chaos testing & collected metrics in **Jenkins** and pitched EC2 resource allocation optimization suggestions to the team
- Wrote a Python script automating health check processes for **20+ endpoints**, sharing it across **8 teams** for daily use

California Air Resources Board

Jun 2023 – May 2024

Data Analyst Intern (Year-Round)

Sacramento, CA

- Led QA/QC on 6 datasets each containing over 10,000 rows of equipment project data and compiled comprehensive reports on aggregate air pollution emissions for the annual CAP reporting cycle, under the Carl Moyer Memorial program
- Implemented a data pipeline that streamlines data transfers from the database to the front-end interface using **automated SQL queries** based on triggers, **reducing manual querying and entry by ~40%**
- Conducted **QA software testing** on over 10 features of the CARL database management system following AGILE

AggieWorks (UC Davis Development Club - aggieworks.org)

Sept 2022 – Jun 2023

Software Engineer

Davis, CA

- Contributed as a founding engineer for Clubby.org (campus club finder app), implementing front-end UI components (modal, cards, navbar, search) with conditional rendering in Svelte, and REST API development in GORM and PostgreSQL
- Worked on a team of software engineers, product managers and designers to scale the app to **400+ users on campus**

PROJECTS

Custom TCP Protocol Design & Implementation | GitHub | *Python*

Dec 2024

- Designed and implemented a custom TCP networking protocol improving on TCP Reno's congestion window sizing mechanism, and collected metrics on throughput, per-packet delay, and jitter with rigorous testing
- **Placed 1st** in ECS 152A: Computer Networks in-class project competition, **receiving an automatic A+ in the class**

Hexhunt Word Puzzle Solver | GitHub | *C++*

July 2024

- Wrote a C++ script that uses Trie data structure, DFS (depth-first search) and backtracking algorithms to maximize points on the HackMIT's hexhunt puzzle, winning a **guaranteed admission to HackMIT (20th place out of ~500 solvers)**

Yoga Form Detection/Correction Model with Real-Time Video | GitHub | *TensorFlow, Python*

Apr 2024

- Used TensorFlow's PoseNet model to build a live webcam feed that tracks body points in relative coordinates, comparing them against a ML model trained on images of correct yoga forms to give generative feedback

Decentralized Exchange and ERC-20 Token/Tokenomics | GitHub | *Solidity, Web3.js*

Dec 2022

- Deployed Solidity smart contracts on mainnet for ERC-20 token and a decentralized exchange (tradable using Metamask wallet), implementing **constant product market formula in Automated Market Making (AMM)** systems

TECHNICAL SKILLS

Languages: Python, Java, HTML/CSS/JavaScript, C, C++, SQL

Frameworks/Tools: Git, Spring Boot, JUnit, Jenkins, React.js, Selenium, PostgreSQL, Insomnia, Docker, Linux, Excel

Concepts: Object-Oriented Programming (OOP), Software Development Life Cycle (SDLC), Agile Scrum Methodologies

Certifications: AWS Certified Cloud Practitioner, CompTIA IT Fundamentals+ Certification

AWARDS & HONORS

UC Davis Little Bang! Pitch Competition Winner - Graduate School of Management (Awarded \$1k)

CyberPatriot National Semifinalist & Cyber Skyline Social Cyber Cup 3rd Place (Awarded \$2.5K)

UC Davis - College of Engineering Dean's Honors List