Alan Zhang

azhang2025@berkeley.edu | (775) 440-0229 | linkedin.com/in/alanzhang-

EDUCATION

University of California, Berkeley — **May 2025**

B.S. Electrical Engineering & Computer Sciences (EECS) — **GPA: 3.8**

Relevant Coursework: Efficient Algorithms, Database Systems, Introduction to Artificial Intelligence, Introduction to Machine Learning, Data Structures, Machine Structures, Computer Programs, Principles and Techniques of Data Science, Designing Information Devices I/II

Organizations: V.P of Valley Consulting Group (VCG), Tau Beta Pi, Eta Kappa Nu (HKN), V.P of Poker Club, Ski Club

TECHNICAL SKILLS

Languages: Java, Python, Ruby/Rails, C/ C++, Scala, SQL, HTML, CSS, JavaScript, Typescript, Assembly, RISC-V, Shell Script

Libraries/Tools: React, AWS, Docker, MongoDB, GraphQL, BigQuery, Kafka, Airflow, Kubernetes, Datadog, Splunk, Pandas, Git

Other: Agile Methodologies (Scrum, Kanban), CI/CD, OWASP Top 10, Extract Transform Load (ETL), Jira/Confluence, Risk Domain

PROFESSIONAL EXPERIENCE

Gusto | *Software Engineering Intern* — *New York City, New York* | May 2024 – Aug 2024

- Crafted a React UI for a company approval tool, centralizing Risk OPs data into an analytical interface for efficient decision-making
- **Migrated 34/36** fraud metrics from a standalone service, requiring an entirely **new dynamic architecture** and multiple data migrations
- Decoupled risk ML models from the service, boosting **model iteration speed by 75%,** enabling faster updates and experimentation
- Fully integrated **100,000+ entries of consortium data** on fraudulent companies from an external API through backfills and a daily job

Tesla | *Software Engineering Intern* — *Palo Alto, California* | Jan 2024 – Present

- Engineered dynamic web page generation tool to visually represent test coverage trends, optimizing firmware release analysis by 17%
- Streamlined test info retrieval by migrating SQLite to a scalable **MongoDB** architecture with **Kubernetes**, **reducing query times by 83%**
- Spearheaded CyberTruck HVAC testing and fleet-wide validation using **Ruby** and **Splunk**, achieving **97% reliability post release**

Intuit, Credit Karma | *Data Engineering Intern* — *Charlotte, North Carolina* | May 2023 – Aug 2023

- Developed an automatically generated configuration file system for secure management of **ETL workflow**s in the cloud environment
- Integrated a SQL anti-pattern recognition tool that detected and provided recommendations for **2000+ queries in BigQuery**
- Migrated storage of BQ plugin conf. files from **GCS to Google Datastore**, improving query and search performance by **over 62%**

Tyler Technologies | *Software Engineering Intern* — *Denver, CO* | May 2022 – Feb 2023

- Centralized trusting of SSL certificates through a supplemental trust program that reduced **deployment time by a total of 32%**
- Introduced and implemented **PDFTron SDK** to allow Tyler's integrators to efficiently view and manage government documents
- Integrated and documented a REST-based API for a product used to access key user data for the Content Strategy team

Starbucks | *Technical Consultant* — Berkeley, CA | **Aug 2022 – Dec 2022**

- Utilized researched components about **Metaverse and Web3 offerings** to improve end-to-end visibility for the Starbucks team
- Resolved technical and software difficulties when implementing **Polygon blockchain technology** into their Star Rewards programs

PROJECTS

Investment Leverage | *Python, SciPy*

- Implemented a barebones **Artificial Neural Network (ANN)** to classify handwritten digits in RISC-V assembly code
- Optimized code to achieve **20% speedup compared to naive implementation in C** and learned how to test & debug assembly code

E-Learning Companion Bot | *Python, Selenium, Chat-GPT*

- Developed an interactive online learning companion using **Chat-GPT, Selenium, and Python**, enhancing study efficiency by 33%
- Incorporated real-time, context-based questioning and answering during learning activates, boosting engagement and comprehension

Mock Cryptocurrency Trading Website | *Angular, Firestore*

- Developed a secure website utilizing Angular, allowing users to engage in trading of cryptocurrencies without risking their actual funds
- Integrated **Coinbase REST API** to access real-time cryptocurrency information, including prices, trade orders, and interactive graphs
- Utilized **Firestore, a NoSQL document database** to securely store and manage user information ensuring efficient data retrieval