

ANDREW SHIEH

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EDUCATION

University of California, Berkeley

B.S. Electrical Engineering and Computer Science

Berkeley, CA

Expected May 2022

- **Cumulative GPA:** 3.7/4.0; **Major GPA:** 3.9/4.0
- **Relevant Coursework:** Algorithms, Computer Architecture, Computer Networking, Data Structures, Discrete Mathematics and Probability, Foundations of Data Science, Information Devices and Systems, Linear Algebra

EXPERIENCE

UC Berkeley College of Engineering

CS 61A Course Tutor

Berkeley, CA

Aug 2020 - Present

- Leading weekly 4 person tutorials and 60+ person office hours for a 2000+ person intro computer science course
- Teaching effective utilization of core programming concepts (e.g. recursion) with personalized student support

Roblox

Software Engineering Intern

San Mateo, CA

Jun 2020 – Aug 2020

- Backend development on the infrastructure services team for telemetry of Roblox Cloud Services servers
- Built a highly-available pod-level monitoring and alerting system for thousands of servers across 20+ PoPs
- Leveraged Docker, Chef, Prometheus, and Kafka to configure, collect, alert, and send TBs of server metrics

vArmour

Software Engineering Intern

Mountain View, CA

Jun 2018 – Aug 2018

- Created Azure virtual network watcher and developed program to quickly retrieve and normalize flow logs
- Developed a Python SDK to wrap a RESTful API and wrote 800+ unit test scripts, reaching full code coverage
- Implemented customer-facing product connectivity detection program, saving 10+ hours of troubleshooting

SELECTED PROJECTS

Real-Time Bus Tracker (Javascript, HTML, CSS)

Apr 2020

- Created a full stack bus tracking web application using Google Maps API to display a customized transit map
- Implemented real-time bus location and bus delay tracking using data from the Open511 transit API

NumC Computing Library (C, Python)

Mar 2020 – Apr 2020

- Wrote a NumPy-like matrix math program in C and created a Python interface by leveraging the Python/C API
- Optimized the naive implementation using performance programming techniques (SIMD and OpenMP) to achieve an 85x+ overall speedup and 1670x+ matrix powering speedup

Modern Web Application (Python, Flask, AWS)

Dec 2019 – Jan 2020

- Built web application with dynamic content loading from AWS DynamoDB with a Fargate microservice
- Created user registration and authentication using AWS Cognito to analyze user behavior

Mini Maps (Java)

Sep 2019 – Oct 2019

- Implemented backend for Google Maps-like web application with image rastering, location name searching, destination routing, and turn-by-turn navigation
- Leveraged A* algorithm to optimize shortest path searching using data from the OpenStreetMap project

SKILLS & INTERESTS

Languages/Technologies: Proficient in Python, Java, C++; familiar with C, Javascript (React, Node), HTML/CSS; previously used Ruby, SQL. Experienced with Git, Amazon Web Services, Docker, Unix/Linux, MERN stacks.

Activities: Computer Science Mentors (led weekly group tutoring classes for intro CS course), Demystifying Data (data science industry forum), Alpha Kappa Psi (business fraternity), Taiwanese American Student Association

Interests: Tennis, backpacking, Golden State Warriors, electronic dance music, eating ramen