

ANDREW SHIEH

andrew.shieh@berkeley.edu | (650) 823-5233 | <https://ashieh.com>

EDUCATION

University of California, Berkeley

B.S. Electrical Engineering and Computer Science

Berkeley, CA

Aug. 2018 – May 2022

- **GPA:** 3.7/4.0
- **Relevant Coursework:** Algorithms, Computer Architecture, Data Structures, Computer Networking, Information Devices and Systems, Foundations of Data Science, Discrete Math & Probability, Linear Algebra & Differential Equations

PROFESSIONAL EXPERIENCE

Roblox

Software Engineering Intern

San Mateo, CA

Jun. 2020 – Aug. 2020

- Telemetry team

UC Berkeley EECS Department

Academic Intern (CS 61A and CS 61BL)

Berkeley, CA

Jan. 2019 – Aug. 2019

- Assisted 40+ person office hours and lab sections for two 1600+ person introductory computer science courses
- Strengthened student comprehension of computer science concepts with individualized teaching
- Taught effective utilization of data structures and algorithms through projects and labs, improving understanding

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

- Built backend and front-end for a bus tracking web application using Google Maps API to display a custom map
- Implemented real-time bus location and bus delay tracking using data from the Open511 transit API

Scientific Computing Optimization (C, Python)

Mar. 2020 – Apr. 2020

- Wrote a NumPy matrix math program in C and leveraged the Python/C API to create a Python interface
- Optimized the naive implementation using performance programming techniques (SIMD and OpenMP) to achieve a 85x+ comprehensive 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

MiniMaps (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
- Used 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.js), SQL; previously used Ruby, NumPy. Experienced with Git, Amazon Web Services, Microsoft Azure, Unix/Linux.

Activities: Computer Science Mentors (taught weekly sections 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