ANDREW SHIEH

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EDUCATION

University of California, Berkeley — **Berkeley, CA**
B.S. Electrical Engineering and Computer Science — *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

Roblox — **San Mateo, CA**
Software Engineering Intern — *Jun 2020 – Present*

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

UC Berkeley EECS Department — **Berkeley, CA**
Academic Intern — *Jan 2019 – Aug 2019*

- Assisted 60+ 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 — **Mountain View, CA**
Software Engineering Intern — *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

Scientific Computing Optimization (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.js), SQL; previously used Ruby, NumPy. Experienced with Git, Amazon Web Services, Microsoft Azure, Chef, Unix/Linux.

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