Andrew Shieh

andrew.shieh@berkeley.edu | (650)-823-5233 | andrew-shieh.github.io

Education

University of California, Berkeley — **Berkeley, CA**
B.S. Electrical Engineering & Computer Science — *Aug 2018 – May 2022*

- **GPA: 3.63/4.0 (Major GPA: 3.7/4.0)**
- **Relevant Coursework:** Data Structures, Algorithms, Discrete Mathematics & Probability, Structure and Interpretation of Computer Programs, Foundations of Data Science, Computer Architecture (in progress), Internet Architecture (in progress), Artificial Intelligence (in progress)

Experience

Computer Science Mentors — **Berkeley, CA**
Junior Mentor (CS 61A) — *Jan 2020 – Present*

- Lead weekly small-group discussion sessions in the largest introductory computer science course
- Strengthened students' comprehension of core computer science concepts, improving exam scores

Alpha Kappa Psi, Business Fraternity — **Berkeley, CA**
Technology Director — *Jan 2020 – Present*

- Maintained and enhanced functionality and aesthetics of the fraternity website, using Ruby on Rails
- Engineered a new diversity applicant system, increasing number of diversity applicants and members
- Built technological platforms for internal organizations, including website and recruiting portals

vArmour Networks — **Mountain View, CA**
Software Engineering Intern — *Jun 2018 – Aug 2018*

- Created Azure virtual network watcher and developed programs to retrieve and normalize flow logs
- Developed a Python SDK to wrap a RESTful API and wrote over 800 unit test scripts for the SDK
- Created customer-facing product connectivity detection, saving hours of unneeded troubleshooting

Projects

Modern Web Application *(JavaScript, Python, Flask, AWS)*

- Built a web app hosted on a front-end web server and connected to a backend DynamoDB database
- Created user registration and authentication to analyze user interactions and behavior

Cube Renderer *(Java, Python)*

- Created program in Java to render a rotating cube with custom cube mesh and matrix math modules
- Wrote a port of the program in Python

BearMaps *(Java)*

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

Lisp Language Interpreter *(Python)*

- Created an interpreter for instant parsing and evaluation of programs written in the Lisp language
- Implemented using tail-recursion, allowing for faster interpretation and support of unlimited tail calls

Skills & Interests

Languages: Python, Java, C, JavaScript, HTML, CSS, SQL, Ruby, Arduino
Libraries and Frameworks: React, Node.js, Express, Flask, NumPy, Ruby on Rails
Tools: Git, AWS, Microsoft Azure, Docker, Heroku, MongoDB, Atlassian Suite, Microsoft Suite, Linux
Interests: Tennis, Camping, Golden State Warriors, Hiking national parks, Ramen