

# Gavin I. Kliger

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## Education

### University of California, Berkeley (3.91 GPA)

Berkeley, CA

B.S. IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Expected May 2020

- CS61A Structure and Interpretation of Programs · CS61B Data Structures · CS61C Computer Architecture · CS70 Discrete Math and Probability Theory · EE16A and 16B Designing Information Devices and Systems · Math53 Multivariable Calculus · CS170 Efficient Algorithms · CS8 Foundations of Data Science · CS198 Machine Learning

## Skills

**Programming** Python, C/C++, JAVA, Go, LaTeX, SQL

**Web Development** JavaScript, HTML5, CSS3

## Experience

### Undergraduate Research, Berkeley NetSys Lab (Prof. Scott Shenker)

Berkeley, CA

RESEARCHER FOR SCOTTY: AN AUTONOMOUS HELPING HAND FOR KUBERNETES CLUSTERS

Apr. 2018 - Present

- Researched ways to automatically maintain system invariants in cloud based micro-service deployments while providing safety guarantees. Studied methods to optimize resource allocation for cloud deployments while maximizing performance and minimizing cost.
- Used the Kubernetes Go client to dynamically monitor and respond to events in the cloud. Implemented a local representation of state to track nodes, pods, services, and deployments, as well as deployment-pod and node-pod mappings. Wrote triggers to scan the cluster and monitor invariants.
- Attended DockerCon 2018. Interviewed dozens of industry representatives to guide my research, including representatives from Apple, Uber, Microsoft, and Equifax.

### Teaching Experience, Irvine Public School Foundation

Irvine, CA

TEACHING INSTRUCTOR FOR BRAINSTORM STEM EDUCATION

Jun. 2017 - Aug. 2017

- Worked full time teaching at public schools in Irvine, CA. Interacted with parents and students on a daily basis, and taught programming, Arduino, and robotics.

## Projects

### More Project Information on Website

[HTTPS://GKLIGER.GITHUB.IO](https://gkliger.github.io)

- Worked on a team with three other students to design, develop, and demonstrate a VR museum application for iOS devices. Used Swift 2.2 and Apple's 3D SceneKit to create a virtual museum with multiple exhibits. Incorporated 3D audio effects using simple linear panning. (COSMOS Program, UC Irvine)
- Used Java to develop a random world generation algorithm which I used to create a 2D game. The algorithm ensured that all parts of the world were reachable for the player.
- Implemented an application to create a Voronoi diagram visualization of nearby restaurants and their ratings using the Yelp academic dataset in Python. Application used machine learning techniques to predict ratings.

## Extracurricular Activities

### HKN (EECS Honor Society)

Berkeley, CA

INDUSTRIAL RELATIONS OFFICER

Feb. 2018 - Present

- Coordinate with dozens of companies to promote, organize, and host info-session recruiting events.
- Hold volunteer tutoring hours each week. Organize outreach events for local high school students.

### IEEE (Institute of Electrical and Electronics Engineers)

Berkeley, CA

WEB DEVELOPMENT OFFICER

Aug. 2017 - Jan. 2018

- Updated and maintained the website for IEEE's UC Berkeley student chapter.

## Honors & Awards

EAGLE SCOUT, NATIONAL MERIT SCHOLAR, NATIONAL AP SCHOLAR, BLACK BELT TAEKWONDO, CM PIANO 10