Gavin I. **Kliger**

(949) 441-8800 | gavinkliger@gmail.com | https://gkliger.github.io/ | gkliger | Gavin Kliger

Education

University of California, Berkeley (3.95 GPA) *Berkeley, CA*

B.S. IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE *Expected May 2021*

- CS61A/B/C Computer Software and Architecture · CS70 Discrete Math and Probability Theory · EE16A/B Information Devices and Systems · Math53 Multivariable Calculus · CS170 Efficient Algorithms · CS162 Operating Systems CS198 Machine Learning · CS186 Database Systems · CS161 Computer Security · CS188 Artificial Intelligence

Skills

Programming Python, C/C++, JAVA, Go, SQL, RISC-V

Web Development JavaScript, HTML5, CSS3

Experience

Twitter, Software Engineering Internship *San Francisco, CA*

CONTINUOUS INTEGRATION AND INFRASTRUCTURE *May. 2019 – Aug. 2019*

- Helped to architect Twitter's GCP Jenkins CI infrastructure, ensuring that visibility, management, and alerts mirrored that of our onprem infrastructure. I also extensively redesigned Twitter's internal CI monitoring software to more accurately track per-build metrics for comparison to GCP. Worked extensively with Dockerfiles, Helm charts, Artifactory, GKE, Kubernetes, Pants, and Docker.
- Led project to virtualize Twitter's CI Mac infrastructure to support software defined hardware. Redesigned Twitter's Mac infrastructure to incorporate GCP and MacStadium while maintaining complex security, performance, and cost requirements. I presented my report to the Sr. Manager of my department and the entire CI team.

Berkeley NetSys Lab, Undergraduate Research (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.

Projects

HTTPS://GKLIGER.GITHUB.IO

- Designed and implemented an operating system in c, including a scheduling algorithm, file system, locking primitives, and support for user programs with arguments.
- Implemented a secure file-sharing server using Go. Used industry grade encryption techniques to ensure data was IND-CPA secure and tamper proof. Privileges were revocable.
- 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.

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

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