Boris Alguliev

contact

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education

University of California, Berkeley *Summer 2018 — Spring 2020*

B.S., Electrical Engineering & Computer Sciences

City College of San Francisco *Fall 2016 — Spring 2018*

A.S., Math, Physics, and Computer Science

relevant coursework

Computer Security

Operating Systems & Systems Programming

Database Systems

Artificial Intelligence

Efficient Algorithms & Intractable Problems

Data Structures & Algorithms

proficiencies

Java ●●● Python ●●● C ●●● SQL ●●○ Go ●●○ Swift ●○○

projects

Custom Keyboard — C: Custom firmware with macros and layers for a keyboard layout of my design focused, on increasing productivity. Made using the open-source QMK firmware. *(Link)*

Physic Simulations — Python: Interactive visual physics simulations hosted on glowscript.org to help teach physics concepts such as phasor analysis and ray tracing off of spherical mirrors. *(Link)*

OS Kernel — C: Modified the Pintos operating system, a codebase of over 30,000 lines of code, adding process spawning, system calls, thread scheduling, interrupt handlers, virtual memory growing and shrinking, an inode-based file system, and kernel implementations of locks, semaphores, and condition variables.

E2E Encrypted File Sharing — Go: Designed and implemented a file sharing system that uses cryptographic techniques to maintain confidentiality, integrity, and authenticity, even on an adversarial network and server.

Graphs Library — Java: Library for creating and using graphs, as well as traversing them with A*, Dijkstra's, BFS & DFS, with functionality for custom traversals through interfaces.

employment

Private Tutor, Physics and Computer Science *Spring 2019 — Present*

- Created semester-long plans for high school and college students based on learning styles and strengths.
- Compiled and created study materials such as equation sheets and assignments.

Lab Assistant for the Structure and Interpretation of Computer Programs *Fall 2018*
at UC Berkeley

- Provided support to academic staff in teaching the introductory computer science course CS61A.
- Offered one-on-one tutoring during office hours and administered group-based activities.

Tutor of Physics, Math, and Computer Science *Fall 2016 — Spring 2018*
at the City College of San Francisco

- Provided drop-in tutoring services, both individual and group based, for fellow students.
- Worked to improve graduation rates among under-represented groups and communities.

honors

Tau Beta Pi Engineering Honor Society *at UC Berkeley* *Fall 2018 — Present*

Transfer Scholarship *from UC Berkeley* *Summer 2018*

Alpha Gamma Sigma Honor Society *at the City College of San Francisco* *Spring 2017 — Spring 2018*