## **Boris Alguliev**

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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

Operating Systems & Systems Programming

## relevant coursework

Computer Security

Artificial Intelligence

Efficient Algorithms & Intractable Problems

**Database Systems** 

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.

# employment

# Lab Assistant for the Structure and Interpretation of Computer Programs at UC Berkeley

Fall 2018

- > 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 Learning Assistance Center

- → Provided drop-in tutoring services, both individual and group based, for fellow students.
- → Worked to improve graduation rates among under-represented groups and communities.
- > Compiled and created study materials such as equation sheets and studying plans.

### 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

