# Christopher Allsman

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## Education

**2015-2019** BA in Computer Science - The University of California, Berkeley
Graduated with High Distinction (3.87 GPA)
Coursework in Computational Biology, Machine Learning, and Programming Language Design

## Skills

**Languages**

- Python (Expertise)
- Java (Experienced)
- Go (Experienced)
- HTML, CSS, JavaScript

**Technologies**

- Unix Environments (Ubuntu)
- Git Version Control
- Django & REST APIs
- JavaScript Frameworks (React)

**Professional Skills**

- Test Driven Development
- Technical Communication
- Relational Databases & SQL
- Data Analysis/Processing

## Career & Volunteer Experience

**2017 - 2019** University of California, Berkeley
*Instructor - CS 61A (2019), Teaching Assistant, Head of Content (2017 -2019)*

- Developed software and web applications, including a system for automating assignment creation, allowing the course to scale to 150 staff members and 1,700 students
- Spearheaded design and testing for the course's first new project since 2015, conceived to teach students recursion and sequence processing. Recognized as a Nifty Assignment at SIGSCE 2020
- Analyzed feedback from over 200 students and devised improved, personalized sections and other curricular elements for the course's first online offering to better address students' learning needs
- Refined existing lesson plans and innovated new methods for teaching concepts in Python, Scheme, and SQL, leading to teaching evaluations in the top 10% of all GSIs

**2016 - 2019** Computer Science Mentors
*Internal Vice President (2019), Course Coordinator (2018), Mentor (2016-2017)*

- Facilitated the development of small-group tutoring sections by organizing scheduling logistics and content creation, scaling the organization to support over 1,500 students and 300 mentors
- Revamped training given to 100+ mentors at a bi-annual orientation to address multicultural competency, classroom diversity, and mental health issues

**2016** Fresno Unified School District
*Web Development Intern*

- Created and optimized search functionality for the Educational Technology website, allowing teachers at over 100 schools to easily access classroom resources and tools
- Collaborated with the Department of Curriculum to produce responsive and reusable frontend templates, providing a centralized location for faculty to share content

## Projects

**2019** Lab Planner

- Led a multidisciplinary group to create a Java application capable of generating genetics experiments from a minimal specification, used to automate running a 25-person lab
- Simplified the process of tracking lab inventory by building a database of equipment, automatically updated as experiments progress and preloaded with 15 types of containers
- Enabled scheduling for 30+ person labs by assigning students tasks based on their availability and level of training, arranging tasks to minimize downtime

**2018** Typed Python Compiler

- Teamed with a group of 4 people to write over 15,000 lines of C++ code in ~3 months, developing a compiler which iterated on Python 2 by introducing static type checking, generics, and overloading
- Optimized integer operations to be twice as space-efficient and up to ten times faster