

# TYLER NGUYEN

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## Education

### University of California, Berkeley

B.S. Electrical Engineering and Computer Sciences (CSE)

2014 - 2018

GPA: 3.35

- CS 61A: Structure and Interpretation of Computer Programs
- CS 61B: Data Structures and Advanced Programming
- CS 61C: Machine Structures
- Physics 7B: Heat, Electricity, and Magnetism
- Math 54: Linear Algebra and Differential Equations
- EE 16A: Designing Information Devices and Systems
- CS 70: Discrete Mathematics and Probability Theory
- CS 170: Efficient Algorithms and Intractable Problems  
*Fall 2016*
- CS 188: Introduction to Artificial Intelligence  
*Fall 2016*

## Experience

### Medium One Developer

2016 - present

Medium One is a platform for gathering and processing data from virtually any IoT device. I assisted in implementing a SPI driver used on a microcontroller board to interface with an external Wi-Fi module in addition to programming the software that allows it to authenticate and transmit data to our servers. I also created a preliminary implementation of a websocket-based connector between our service and a third party platform. In addition, I created Python workflows to produce metrics from acceleration and proximity data.

### UC Berkeley Open Computing Facility (OCF) Staff Member

2015 - present

The OCF provides free services to students, faculty, and staff, including printing, web hosting, and UNIX shell and email accounts. As a staff member, I provide on-site computer lab support and maintenance of the infrastructure required for the facility's services.

## Skills

### Programming Languages

- Proficient in: Python, Java, C
- Experience with: Bash, Scheme, MIPS Assembly

### Notable Projects

- **Scheme** (Python)  
Developed a Scheme interpreter to demonstrate understanding of recursion, scoping, and parsing.
- **Gitlet** (Java)  
Designed and implemented a simplified version of the Git version control system based on serialization.
- **MIPS Assembler** (C and MIPS Assembly)  
Implemented an assembler and linker that handles a subset of the MIPS instruction set.
- **PageRank on Spark and Amazon EC2** (Python)  
Implemented a radically simplified version of the PageRank algorithm using a Python MapReduce framework.

### Other Software

- Microsoft Office (Word, PowerPoint, Excel)
- Adobe CS6 (Photoshop, Illustrator, InDesign)
- Git version control system
- Docker application container system
- L<sup>A</sup>T<sub>E</sub>X typesetting system
- REAPER Digital Audio Workstation

## Extracurriculars

### Computer Science Undergraduate Association (CSUA) Member

2015 - present

CSUA supports computer science students by facilitating industry events, hackathons, and workshops.

### Tutoring

High school essay writing, math, biology, physics, and SAT/ACT preparation

2012 - present

### Interests

Programming, audio engineering, retro gaming

## Honors and Awards

- National Merit Finalist
- LSI Chairman's Scholarship