Tyler Nguyen

Education

University of California, Berkeley *2014–2018*
B.S. Electrical Engineering and Computer Sciences (CSE) *GPA: 3.537*

- 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/B: Designing Information Devices and Systems
- CS 70: Discrete Mathematics and Probability Theory
- CS 170: Efficient Algorithms and Intractable Problems
- CS 188: Introduction to Artificial Intelligence
- CS 189: Introduction to Machine Learning
- EE 127: Optimization Models and Applications
- CS 162: Operating Systems and Systems Programming
- CS 168: Introduction to the Internet
- CS 161: Computer Security
- Statistics 155: Game Theory

Experience

- **Software Engineering Intern** at Cisco Systems *May–August 2017*
  On an identity management project, I helped complete the frontend for tenancy administration and integrated it with the backend server. In addition, I created a configurable logging and capping system for email and SMS notifications, accessible via a REST API.
- **Developer** at Medium One *May–August 2016*
  Medium One is a platform for gathering and processing data from IoT devices. I contributed to a Wi-Fi module driver for a microcontroller along with the software that allowed it to securely access the platform. I also created a preliminary implementation of a connector between the platform and a third-party service and created workflows to process sensor data.
- **Staff Member** at UC Berkeley Open Computing Facility (OCF) *2015–2017*
  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 ASM, React.js

Other Software

- Microsoft Office (Word, PowerPoint, Excel)
- Adobe CS6 (Photoshop, Illustrator, InDesign)
- Git version control system
- Docker/Kubernetes containerization system
- LaTeX typesetting system
- REAPER Digital Audio Workstation

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.
- **Horse** (Python)
  Leveraged randomized graph traversals with a heuristic, dynamic programming, and post-processing to approximate solutions to an NP-hard problem.
- **Pintos Operating System** (C)
  Implemented multiple process schedulers (priority donation, MLFQS), system calls for loading user programs, and a filesystem with directories.

Extracurriculars

- **Computer Science Undergraduate Association (CSUA) Member** *2015–present*
  CSUA supports computer science students by facilitating industry events, hackathons, and workshops.
- **Tutoring** *2012–present*
  High school essay writing, math, biology, physics, and SAT/ACT preparation
- **Interests**
  Programming, audio engineering, retro gaming

Honors and Awards

- National Merit Finalist
- LSI Chairman's Scholarship