Tyler Nguyen

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Education

University of California, Berkeley *2014 - 2018*
B.S. Electrical Engineering and Computer Sciences (CSE) *GPA: 3.485*

- 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
- 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 *Fall 2017*
- CS 168: Introduction to the Internet *Fall 2017*

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

Other Software

- Microsoft Office (Word, PowerPoint, Excel)
- Adobe CS6 (Photoshop, Illustrator, InDesign)
- Git version control system
- Docker application container 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.
- **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.

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