

Jonathan Murata

jonmurata.me

jmurata@berkeley.edu | (phone redacted)

linkedin.com/in/jmurata/

EDUCATION

- **University of California, Berkeley** Berkeley, CA
B.S. Electrical Engineering & Computer Science *August 2015 – May 2019*
B.S. Mechanical Engineering *August 2015 – May 2019*
GPA: 3.96

Relevant Coursework:

- *Algorithms* ◦ *Artificial Intelligence* ◦ *Probability & Random Processes* ◦ *Machine Learning*
- *Machine Structures* ◦ *Operating Systems* ◦ *Advanced Computer Architecture* ◦ *Parallel Computing*
- *Data Structures* ◦ *Embedded Systems* ◦ *Feedback Control Systems* ◦ *Mechatronics Design*

EXPERIENCE

- **Apple** Cupertino, CA
Systems Software Engineer *August 2019 - present*
 - **Platform Architecture Group:** Incoming software engineer.
- **University of California, Berkeley EECS Department** Berkeley, CA
Graduate Student Instructor *August 2017 - August 2019*
 - **Operating Systems (CS 162) 20-hour Head GSI:** Spring 2019, Summer 2019. Teach 2 discussion sections (80 students) per week. Hold design reviews for the Pintos Operating System projects (Threads, User Programs, File Systems) and grade student design documents. As Head TA: manage all TAs, handle course setup/logistics/grading. Rated 4.62/5 in teaching effectiveness, 4.74 in helpfulness.
 - **Data Structures (CS 61B) 20-hour GSI:** Summer 2019. Teach 4 lab sections (30 students) per week. 3 hour labs consist of coding exercises, worksheets, and mini-lectures. Quality control projects and lab assignments. As an intro course, advise students on the field of Computer Science.
 - **Machine Structures (CS 61C) 20-hour GSI:** Summer 2018, Fall 2018. Course content lead: managed homework, discussion worksheet, lab, and project preparation. Teach 2 discussion sections (100 students) per week. Teach 2 lab sections (60-70 students) per week. Exam writing/grading and 2hr weekly office hours. Rated 4.66/5 in teaching effectiveness, 4.75/5 in helpfulness.

PROJECTS

- **BobaBot:** Automatic Boba (milk tea & tapioca pearls) dispenser. 3 stage-dispensation (pearl, tea, creamer) with rotating service plate. Embedded System Design Lead: interfaced pumps and motors to Raspberry Pi and Arduino, customized a two-phase commit system to synchronize hardware. Programmed in Python.
- **Swarm Lab Persistent Metadata:** System tool for **Global Data Plane** (GDP). Manage metadata storage and access on Unix-based systems to improve fault tolerance. Standardized storage format and enforced GDP agent/service isolation with user files and OS permissions. Programmed in C.
- **Kingdom Conqueror:** Find lowest cost conquering tour over a set of kingdoms. Converted problem to ILP and solved with Gurobi Optimization software. Competition Rank 4 of 230 teams. Programmed in Python.
- **Poly-PEDAL Lab Cockroach Robot:** Inverted, rod-running cockroach robot. Self-directed project to create a mechanical cockroach operating on an alternating tripod system to mimic real-life cockroach thin-rod running. Robot includes 3D-printed limbs with a servo motor tension system. Advised by Prof. Nate Hunt.
- **BearWatch:** Security tower to watch over items in selected area. When an item is removed, sounds an alarm and tracks/records the thief with a servo-mounted camera and computer vision. Programmed in LabVIEW.

SKILLS

- **Programming:** Python, C, Java, **MATLAB**, LabVIEW *proficient bolded*
- **Tools & Design:** Latex, Git, HTML, CSS | **SolidWorks**, Fusion360, AutoCAD, Adobe Illustrator