Maggie Luo

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Education

University of California, Berkeley **Expected Graduation:** May 2020
Computer Science, B.A. • History of Art Minor **Cumulative GPA:** 3.35
Relevant Coursework: The Structure and Interpretation of Computer Programs • Data Structures • Discrete Mathematics and Probability Theory • Algorithms • Database Systems • Machine Structures • Computer Security (Fall '18) • Machine Learning (Fall '18)
Technical Languages & Technologies: Java, Python, HTML/CSS, SQL, Ruby on Rails, Git, LaTeX, Adobe Illustrator, Arduino, Unity

Experience

Software Development Engineer Intern | Amazon *Seattle, WA* May 2018 - Aug 2018
- Working on the Consumer Cloud Enablement team

CS 61A Academic Intern | UC Berkeley *Berkeley, CA* Jan 2017 - May 2017
- Guided students through their weekly lab assignments on abstraction, recursion, trees, and object-oriented programming in Python
- Offered additional assistance with problem sets, labs, class projects, and explaining computer science concepts during office hours

Girls Who Code Summer Immersion Program Student | Square Inc. *San Francisco, CA* Jun 2015 - Aug 2015
- Individually developed projects such as Javascript 2048, a color-detecting Python Arduino robot, Hog, and a personal website
- Programmed Boba Buddies, a Javascript mobile/web video game, with a partner that was presented to the Square staff and CEO
- Later founded the Girls Who Code club at my high school and assisted the head instructor with teaching and mentoring my peers

Projects

Electronic Drink Dispenser November 2017
- Programmed a switch in C++ using an Arduino One that sent a current to a motor powering a water pump to electronically dispense water depending on the bend angle of a resistance-detecting flex sensor wired to a handle and attached to a chest freezer
- Implemented a conversion algorithm to display the leftover liters of liquid in the container using an LED screen and a force sensor

BearMaps April 2017
- Created a QuadTree in Java to recursively store and search for image files to render a map of UC Berkeley at a specified zoom depth
- Added shortest-path finding and autocomplete search by implementing a HashMap-based Graph API, a Trie, and the A* algorithm

Database March 2017
- Built a database in Java that parses SQL queries using regex and conducts table operations such as select, create table, join, and drop
- Handled type checking and simplified join operations using inheritance by implementing Cell, Row, Column, and Table classes

Organizations & Extracurriculars

Berkeley ANova Computer Science Mentors Jan 2017 - Present
Professional Development Chair (Fall 2018), Internal Vice President (Spring 2018), Publicity Chair (Fall 2017)
- Teach computer science in Python to students in low-income, under-resourced middle and high schools across the Bay Area
- Fostered a sense of club community, co-managed a team of 15 officers, and ensured fulfillment of our club's mission statement as Internal Vice President by organizing club socials, leading weekly officer meetings, and handling club logistics

Theta Tau Professional Engineering Fraternity Sep 2017 - Present
Technology Chair (Fall 2018)
- Fundraised $600 for the Environmental Defense Fund by organizing the Succulents for Sustainability event on campus
- Worked with a team to build an electronic drink dispenser that integrated facets of mechanical engineering, electrical engineering, and computer science using a chest freezer, 12W battery, force sensor, water pump, motor, and Arduino One