Maggie Luo

maggiedluo@gmail.com
249 Holyoke St.
San Francisco, CA 94134
(415) 672-0055
github.com/smile4maggie
linkedin.com/in/maggiedluo
maggieluo.com

Education

University of California, Berkeley **Expected Graduation:** May 2020
Computer Science, B.A. • History of Art Minor **Cumulative GPA:** 3.35
Relevant Coursework: Data Structures • Algorithms • Database Systems • Computer Architecture • Computer Security • Artificial Intelligence • Discrete Mathematics and Probability Theory • Operating Systems (IP) • Designing Information Devices and Systems (IP)
Technical Languages & Technologies: Java, Python, HTML/CSS, Ruby on Rails, SQL, Git, LaTeX, Adobe Illustrator, Arduino, Unity

Experience

Software Development Engineer Intern | Amazon *Seattle, WA* May 2018 - Aug 2018
- Integrated an OAuth 2.0-based Authentication and Authorization scheme to a service development and debugging tool by using a Java client API to retrieve a bearer token from the Auth Server and place it in the header of an HTTP request to a resource server
- Generated the correct request to the Java back-end depending on the Auth Type drop-down selection on the Ruby on Rails website
- Wrote comprehensive unit and integration tests for the Java back-end and used RSpec/Capybara for the website's unit and UI tests

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
- 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 equation 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
Corresponding Secretary (Spring 2019), Technology Chair (Fall 2018)
- Manage the Ruby on Rails website on Docker by regularly updating the PostgreSQL database and adding front-end changes
- 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