Maggie Luo

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Education

University of California, Berkeley   **Expected Graduation:** May 2020
B.A. Computer Science
Relevant Coursework: Data Structures • Efficient Algorithms and Intractable Problems • Database Systems • Computer Security
Operating Systems and System Programming • Computer Architecture • Discrete Mathematics and Probability Theory • Artificial
Intelligence • Designing Information Devices and Systems I • Front-End Web Architecture (IP) • Sound and Music Computing (IP)
Technical Languages & Technologies: Java, Python, React/Redux, Javascript, HTML/CSS, SQL, IntelliJ, Adobe Illustrator, Docker

Experience

Software Engineer Intern | Uber *Seattle, WA*   May 2019 - Aug 2019
- Designed and implemented a web application in React/Node.js for a gateway server that manages access to Uber service secrets
  (credentials, tokens, access keys, etc) in order to prevent unwanted manipulation of critical data and improve developer experience
- Created the Redux store, actions, and reducers for managing state to update the interface on search, submit, list, and delete secret
- Developed and tested a Golang rate limiter against requests to the Vault secret store in order to prevent distributed denial-of-service

Software Development Engineer Intern | Amazon *Seattle, WA*   May 2018 - Aug 2018
- Designed and implemented the integration of an OAuth-based security scheme to a Java service development tool in order to
  support the migration towards Native AWS across Amazon's services by communicating with an Auth Server using a RESTful API
- Built a Ruby client to link user input on the Rails website to the Java back-end based on the user's Auth Type drop-down selection
- Wrote comprehensive unit/integration tests using Java mocks and unit/UI tests using RSpec/Capybara for the Ruby on Rails website

The Structure and Interpretation of Computer Programs Academic Intern | UC Berkeley   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

Projects

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 operations using object-oriented programming with Cell, Row, Column, and Table classes

Organizations

Berkeley ANova Computer Science Mentors   Jan 2017 - Present
Community Chair (Fall '19), Professional Development Chair (Fall '18), Internal Vice President (Spring '18), Publicity Chair (Fall '17)
- 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 '19), Technology Chair (Fall '18)
- Managed the Ruby on Rails website on Docker by regularly updating the PostgreSQL database and front-end information
- Planned and organized the Theta Tau Womxn's Meet-Up event by leading intimate group discussions on working women in
  engineering, female stereotypes, body image, sexual health, and promoting gender equality within the fraternity's culture