

# Lucy Qu

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## EDUCATION

**Brown University**, B.S. Computer Science GPA: 3.8/4.0

*Providence, RI | Expected Graduation: May 2022*

- Relevant Courses: Software Engineering, Computer Systems, User Interfaces and User Experience, Algorithms and Data Structures, Object Oriented Programming, Discrete Structures and Probability, Linear Algebra, Honors Statistical Inference
- Activities: Bonner Community Fellowship, Brown Daily Herald Layout Editor

## SKILLS

- Technical: Java (proficient), Javascript (proficient), HTML, CSS, Python (proficient), C (proficient)
- Creative: Adobe Illustrator, Photoshop, Premiere Pro, Final Cut Pro, Lightroom, iMovie

## TECHNICAL EXPERIENCE

**Google**, *STEP Intern*

*Virtual Internship | May 2020 - August 2020*

- Implemented a predictive search algorithm using serializable trie data structure, dynamic programming, and recursion
- Constructed dynamic graph and implemented Dijkstra's algorithm to rank user results based on degrees of separation
- Designed a scheduled polling feature to surface the top user voted options and populate the group challenge
- Deployed the full stack social network web application using **JS**, **HTML**, **CSS**, and **Java Servlets** to Google App Engine
- Integrated Google's Authentication and Charts APIs into a full stack portfolio web application
- Wrote design docs, created intuitive Figma UI mockups, reviewed teammates' code, and wrote JUnit tests with mocking

**GivePulse**, *Software Engineering Intern*

*Virtual Internship | May 2019 - August 2019*

- Develop support for QR code generator and QR code scanner in **React Native** App to enhance user check-in process
- Add additional pages and features to application, update user interface for iOS app, and contribute to existing code base through Git workflow
- Test application, document 40+ bugs and improvements on GitHub, and close 20+ tickets

## CS RELATED PROJECTS

**Maps**, CSCI 0320 Introduction to Computer Engineering - **Java**, **SQL**

*March - April 2020*

- Expanded Dijkstra's algorithm to concurrently build the graph while using A\* algorithm to find the shortest path
- Implemented KDTree and used k-nearest algorithm to find neighbors of inputted coordinates.
- Used SQL statements to extract data from large database files and utilized Guava Cache to reduce run time by 95%.
- Focused on design of project, using proxy classes and interfaces, and wrote extensive system and JUnit tests

**DishUp**, CSCI 0320 Introduction to Computer Engineering - **Java**, **SQL**, **React**

*April - May 2020*

- In team of 4, built a food review web application using Java and React deployed to Heroku
- Wrote Java classes for all essential components (reviews, dishes, tags, dietary restrictions, etc.) and related SQL queries (Bayesian mean rating calculation, favorites, and price average), and implemented dish results sorting and filtering.
- Created high-fidelity Figma mockup, wrote JUnit tests, and integrated checkstyle

**Shell**, CSCI 0330 Introduction to Computer Systems - **C**

*November 2019*

- Built a shell terminal capable of handling multiple child processes, responding to UNIX commands, handling file redirection, process reaping, and signaling

## LEADERSHIP EXPERIENCE

**Brown University**, *Undergraduate TA for CSCI 0160: Data Structures and Algorithms*

*Providence, RI | January 2020 - present*

- Hold weekly office hours that include debugging code and explaining conceptual questions
- Lead two sections weekly consisting of ~10 students each to review material
- Grade homeworks, projects, and answer Piazza questions
- Hold mentorship meetings with students to provide support for Brown CS

**Bonner Community Fellowship**

*August 2018 - present*

- Most selective and prestigious community service fellowship offered by the Howard R. Swearer Center
- Commit to 6-8 hours of service weekly with local community organization (HousingWorks)

**HousingWorks RI at Roger Williams University**, *Data Researcher*

*Providence, RI | September 2019 - present*

- Assist development of annual Housing Fact Book by parsing through census data and making calculations using Excel
- Research affordable housing in Rhode Island and its intersectionality with both micro and macro systems