

Grace Lee

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EDUCATION

Brown University – GPA: 4.0/4.0

Providence, RI

A.B. Computer Science

May 2023

Coursework: Software Engineering, Computer Systems, Data Structures and Algorithms, Functional Programming, Calculus I/II, Multivariable Calculus, Statistical Inference, Discrete Structures and Probability, Linear Algebra

EXPERIENCE

Fidelity Investments

Westlake, TX

Fullstack Software Engineer Intern

June 2021 – August 2021

- Improved ease-of-use for an internal **Angular/GoJS** diagramming app — created wireframes, restructured the UI, and adjusted the way diagram components are added by incorporating new functionalities such as drag and drop.
- Ideated how to design and implement a graph visualization tool and integrate it into the diagramming app.
- Updated documentation of a REST API written in Go via Swagger/Swagger UI and participated in Agile/Scrum sprints.

Brown University Computer Science

Providence, RI

Teaching Assistant

August 2020 – August 2021

- Guided students in 3 courses, each 200+ undergraduates, through class material by holding hours/labs for 4 hours/week.
- Revised a homework assignment to incorporate data ethics and helped debut a new project on graph algorithms.
- Delivered 3 presentations reviewing technical concepts and debugging tips to help students start course projects.

Brown Initiative for Policy (BIP)

Providence, RI

Co-Director, Water Quality Project

September 2019 – June 2021

- Supervised the creation of a lead-poisoning prevention website, prototyped in **Figma** and styled with **CSS/Javascript**.
- Directed and co-authored a case study probing the logistics of 4 successful lead service line replacement efforts in the US.
- Pitched strategies to execute and fund lead pipe replacement to the board of directors of Providence's main water utility.

PROJECTS

Tunes for Change Music Library

React.js, Bootstrap, Node.js, Express.js, MariaDB (SERN)

Jan 2021 – August 2021

- Devised a responsive web app for a music service club alongside 2 team members using **React-Bootstrap**.
- Drafted the database design and API endpoints for a **MariaDB/Node.js/Express** music video library.

Google Maps Clone

Java, React.js, SQLite3, HTML/CSS, Spark

February 2021 – April 2021

- Crafted an application with **React.js** that could render a map based on a **SQLite3** database, re-render on zoom or pan, and show the shortest path between 2 input coordinates after running the K-Nearest Neighbors and A* algorithms.
- Implemented front-end and back-end caching with **Javascript** and Guava Cache, minimizing drawing/querying time.
- Maintained a hierarchy of 30+ extensible classes and constructed 150+ JUnit and system tests.

Fuud

Java, React.js, MongoDB, HTML/CSS, Spark

March 2021 – April 2021

- Built the UI for a food-based, Instagram-like web app with **React.js** — users can follow/unfollow others, make posts with media, edit profile information, pin and search for restaurants, and get restaurant suggestions via a user-user algorithm.
- Connected frontend to backend for 11 pages by retrieving data from **MongoDB** with API calls via **Axios/Spark**.

GetUsPPE Automation Scripts

Python, Pandas, NumPy, BeautifulSoup4

June 2020 – August 2020

- Developed a web scraper that extracted homeless shelter data to a CSV file from over 10,000 URLs using **Pandas**, **BeautifulSoup**, and **NumPy**, which reduced time spent on homeless shelter call list development by 20% overall.
- Automated the process of connecting PPE donors to healthcare workers with a Python script that cleaned a spreadsheet of donor-recipient matches with **Pandas/NumPy** and then sent emails via SMTP, cutting 6 hours of work to 20 seconds.

ACTIVITIES

Driving Tomorrow

Denton, TX

Communications Director

May 2018 – January 2019

- Launched 8 donation drives, collecting and donating a total of 25,000 items toward poverty reduction and disaster relief.
- Initiated a project which built mini-libraries of 300+ books for 3 community organizations serving low-income families.
- Supervised and mentored an 8-member junior board as part of a 4-member executive board.

SKILLS AND INTERESTS

- Programming Languages:** Java, HTML5/CSS3, Javascript, Typescript, Python, Scala, C, ReasonML
- Technologies:** Figma, React.js, Angular, SQL, Apache Spark, NumPy/Pandas, Git
- Interests:** Software engineering, design, UI/UX, yoga, hiking, consuming caffeinated beverages