Grace Lee

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EDUCATION

Brown University — *A.B. Computer Science, GPA: 3.95 — Providence, RI* *September 2019 – May 2023*

Relevant coursework includes Operating Systems and a graduate-level seminar in collaborative robotics (current); Real-Time and Embedded Systems, Computer Systems, Software Engineering, Data Structures and Algorithms, Deep Learning, Computer Vision, Blockchains and Cryptocurrency, Functional Programming, Calculus, Multivariable Calculus, Statistical Inference, Discrete Structures and Probability, and Linear Algebra (completed)

EXPERIENCE

Gusto — *Software Engineering Intern — San Francisco, CA* *June 2022 – September 2022*

- Facilitated the detection of real-time fraudulent payments with 100% greater frequency, reducing company financial loss.
- Owned project from end to end and drafted a tech spec with database schema changes, API endpoints, and UI mockups.
- Backfilled 3 million records by coding a multi-threaded program tested meticulously in development and production.
- Overhauled the backend of a dashboard used to track cash flow, restructuring 3 database tables to optimize query times.
- Pair-programmed regularly with 5 engineers and interviewed stakeholders to gain a thorough understanding of pain points.

Brown University — *Teaching Assistant: CS200/18/111 — Providence, RI* *August 2020 – May 2022*

- Launched a new data structures class, collaborating with a team of 60 to identify and solve roadblocks to student learning.
- Designed and coded a course website with **Figma**/**CSS**/**Jekyll** that drew daily visits from 500 students and staff members.
- Guided students through class material by holding hours, conducting labs, and leading review sessions 10+ hours a week.
- Revised a homework assignment to incorporate data ethics and helped debut 2 projects on graph algorithms.

Fidelity Investments — *Fullstack Software Engineer Intern — Remote* *June 2021 – August 2021*

- Improved the usability of an internal **Angular**/**GoJS** diagramming app: composed wireframes, restructured the user interface, and introduced more intuitive functionalities like drag and drop for inserting new diagram components.
- Ideated the design and implementation of a graph visualizer tool and iterated based on feedback.

PROJECTS

Adaptive Cruise Control *(Arduino)*

- Designed and implemented basic ACC on a 4-wheel toy drive car and conducted unit, acceptance, and integration testing.
- Employed sonar sensor data, pulse-width modulation, watchdog timers, interrupt service routines, and a custom web server.

Google Maps Clone *(Java, React.js, SQLite3, HTML, CSS, Spark)*

- Crafted an application with **React.js** that can render a map based on an **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 and querying time.
- Maintained a hierarchy of 30+ extensible classes and constructed 150+ JUnit and system tests.

Fuud *(Java, React.js, MongoDB, HTML, CSS, Spark)*

- 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 and backend for 11 pages by retrieving data from **MongoDB** with API calls via Axios and Spark.

GetUsPPE Covid Operations *(Pandas, NumPy, BeautifulSoup4)*

- Automated emails coordinating medical supply donations for healthcare workers, reducing 6 hours of work to 20 seconds.
- Developed a web scraper to extract homeless shelter contact info from 10,000 URLs and slashed 90% of manual data entry.

ACTIVITIES

Driving Tomorrow — *Communications Director — Denton, TX* *May 2018 – January 2019*

- Spearheaded 8 donation drives, collecting and donating 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.

SKILLS AND INTERESTS

- **Programming Languages:** Python, Java, HTML5/CSS3, JavaScript, TypeScript, Ruby, Scala, C, ReasonML
- **Technologies/Methodologies:** Figma, React.js, Ruby on Rails, SQL, NumPy/Pandas, Tensorflow, Git, Agile, Linux, Arduino
- **Interests:** backend and systems software engineering, robotics; hiking, yoga, live music, consuming caffeinated beverages