BRIAN QI

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EDUCATION

University of California, Berkeley Computer Science, Bachelor's Expected May 2021
Overall GPA: 3.95/4.00 Data Science, Bachelor's
Relevant Coursework: Data Structures, Algorithms, Software Engineering, Data Science and Machine Learning, Programming Languages, Artificial Intelligence, Discrete Math and Probability, Machine Structures, Linear Algebra

WORK EXPERIENCE

LinkedIn – Software Engineering Intern (Sunnyvale, CA) 01/2020 – 04/2020

- Worked on the Commerce and Enterprise Platform Team to develop a new quoting, ordering and billing platform used by over 2000 LinkedIn sales representatives to make business to business transactions
- Wrote the backend of an activity tracking interface that allows sales representatives to have a clearer insight into customer actions and the state of their orders in order to complete their sales more effectively (Java, Python)
- Created an order state tracking feature within the Commerce Platform that allows sales representatives to know when and why an order is on hold and the steps that can be taken to unblock the various hold states (Java, Python)
- Developed a reconciliation task that runs nightly to verify the correctness of the different systems handling contract and payment data regarding data that has been created or modified within a configurable time duration (Java, SQL)

HelpWear – Software Engineering Intern (Toronto, Canada) 06/2019 – 08/2019

- Collaborated with product management, design and engineering teams to develop and test critical software for a wearable heart monitoring system using agile practices and test-driven development
- Developed a program that generates patient reports from raw ECG data for cardiologists to analyze (Python, SQL)
- Optimized code for ECG segmentation, increasing processing speed by 25 times and segmentation accuracy by 30%
- Created algorithms to detect heart beats and irregular heart rhythms for mobile app and patient reports (Python)

Pioneers in Engineering – Software Engineer (Berkeley, CA) 08/2017 – Present

- Participated in the development of a new field control system for the Pioneers in Engineering robotics competition
- Established inter-process communication by building intermediate Python servers to connect LCM channels to the staff controls GUI, scoreboard GUI, and robot runtime program
- Designed and implemented the front-end interface for competitions used by 350+ participants each year

Computer Science Mentors – Junior Mentor (Berkeley, CA) 01/2019 – Present

- Taught concepts from CS 70 (Discrete Math and Prob. Theory) to 2 auxiliary sections of 5 students every week
- Provided extra services such as review and midterm prep sessions to 700+ students

PROJECTS

Gitlet – Java

- Built a slim version-control system that mimics features from Git (i.e. commit, branch, merge, log, status)
- Used Java's serializable interface and cryptographic hash functions to design internal file structures

Bear Maps – Java, Python

- Utilized real-world mapping data to implement the back end that powers the API of a Java web mapping application
- Performed routing and graph traversals using quad trees and the A* algorithm to find suggested navigation
- Implemented core functionalities include scrolling, zooming, autocomplete, and route finding

Scheme Interpreter – Python

- Programmed an interpreter for a subset of the Scheme language using Python
- Interpreter supports call expressions and special forms (i.e. define, define-macro, cond, let, begin, lambda, mu)

Yelp Restaurants – Python

- Created visualization of restaurant ratings using machine learning and the Yelp academic dataset

Personal Website – HTML, CSS, JavaScript

- Designed and created webpages for my personal portfolio at bqi7.github.io using HTML, CSS and JavaScript

TOOLS AND TECHNOLOGIES

Proficient: Java, LaTeX, Python (+ NumPy, SciPy, scikit-learn, Jupyter, pandas, re, ray distributed computing), SQL
Familiar: Avro, C, CSS, Git, HTML, JavaScript (+ jQuery), Linux, MySQL, RISC-V, Scheme, Unix