Brian Qi

bqi7@berkeley.edu • (510) 766-6734 • github.com/bqi7 • bqi7.github.io

EDUCATION

University of California, Berkeley	B.A. in Computer Science, College of L&S	Expected May 2021
Overall GPA: 3.95	B.A. in Data Science, College of L&S	

Relevant Coursework: Data Structures, Algorithms and Complexity, Discrete Math and Probability, Linear Algebra, Data Science and Machine Learning, Programming Languages

EXPERIENCE

Software Developer – Pioneers in Engineering (Berkeley, CA)   09/2017 – Present
- Assisted in building a new field control system (Shepherd) for the Pioneers in Engineering strategy robotics competition
- Wrote methods in Python to open LCM channels and send/receive information between the main state machine, the scoreboard, and sensors in order to establish inter process communication
- Documented and designed LCM communication with modularity in mind so that future iterations will be able to modify the Shepherd project instead of rebuilding from scratch
- Helped design the front-end interface for competitions using HTML, CSS and JavaScript

Junior Mentor – Computer Science Mentors (Berkeley, CA)   01/2019 – Present
- Responsible for teaching two weekly auxiliary sections concepts from CS 70 – Discrete Math and Probability
- Met with students one-on-one for more personalized academic and personal support and worked on task force to provide extra services such as review and midterm prep sessions

Academic Intern – UC Berkeley Department of EECS (Berkeley, CA)   08/2018 – 12/2018
- Delivered lectures to undergraduate students on topics such as programming, data structures, and software design
- Initiated, facilitated, and moderated classroom discussions in a class size of 25+ students
- Maintained regularly scheduled office hours (1.5-3 hours/week) to advise and assist students with course material

PROJECTS

Bear Maps – Java, Python
- Utilized real-world mapping data to implement the back end of a Java web mapping application
- Performed rastering, routing and graph traversals using quad trees and the A* algorithm to find suggested navigation
- Functionalities implemented include scrolling, zooming, autocomplete, and route finding

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

Scheme Interpreter – Python
- Developed an interpreter for a subset of the Scheme language using Python
- Interpreter supported 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
- Used a Voronoi diagram to section Berkeley into regions shaded by the predicted rating of the closest restaurant

Ants vs. Some-Bees – Python
- Engineered own version of a popular tower defense game using functional/object-oriented programming paradigms

HONORS

Dean's Honor List	Spring 2018 – Present
Upsilon Pi Epsilon (UPE): Computer Science Honor Society	Spring 2019 – Present

- Facilitated private academic tutoring and office hours for engineering students to succeed in lower division courses

SKILLS

Proficient: Java, Python (numpy, scipy, Jupyter, pandas, ray), SQL
Familiar: CSS, Git, HTML, JavaScript, Scheme, LaTeX