Brian Kim

UC Berkeley Class of 2022
Computer Science, Statistic Major 3.61/4.00

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Portfolio: https://s3kim2018.github.io/BrianKim-Website/
Github: https://github.com/s3kim2018

Coursework

CS61B: Data Structures
CS70: Discrete Math and Probability Theory
Stat134: Concepts of Probability
CS170: Algorithms
CS61C: Machine Structures
EE16A: Designing Information Systems
Stats150: Stochastic Processes
CS188: Introduction to Artificial intelligence

Projects

Edu Audio - *HTML/CSS/JS, Flask, React-Native, Tesseract, Firebase, Pytorch*
- Built a web/mobile app that converts professors' live notes to audio for visually impaired students.
- Created web templates for the front end and built a backend server with Flask.
- Retrained the Tesseract library on handwritten MNIST datasets, used Firebase for platform integration.

RouteSafe - *Swift, Javascript, Firebase, MapKit*
- Built an IOS app that makes driving safer by providing navigation that considers safety in route-picking.
- Used orthogonal matching pursuit to determine the safest path a vehicle can take.
- Worked on the backend (building endpoints, storing data, and firebase integration).

Graph Traversal Visualizer - *HTML/CSS/JS*
- Built a web application that visualizes graph traversal algorithms.
- Designed a UI where the user can choose the grid density and place walls and weights on nodes.
- Visualizes BFS, DFS, Dijkstra's, A*, and Kruskal's algorithm.

Chess Engine - *HTML/CSS/JS*
- Built a web based chess game with all the rules implemented.
- Using game trees and alpha beta pruning, built an AI that can look 3 moves forward.

Differential Problems Generator - *Python*
- Using a recursive data structure, built a python script that can generate derivative problems.
- The length, numbers, symbols used are all randomly generated.
- Teacher has the preference to select the intensity of the types of problems generated.

Work Experience

CodeSuite SWE Full Stack Intern - *May 2020 ~ Aug 2020*
- Built many of the client side interfaces: built the code editor, and a timer for coding competitions.
- Worked on Spring Security, building endpoints for server side functionality of user authentication.
- Built front end templates for the main, contest, login/register, and problems page.

Undergraduate Research Assistant under Prof Sequin- *October 2020 ~ Present*
- Working on sweep generation for a Free Form Surface Generator (NOME)
- Coded a sphere generator that renders a specified shape with a given radius, angle, and cross section

Academic Intern - *January 2019 ~ May 2020*
- Helped 30+ students learn about OOP, recursion, algorithms, and data structures.
- Tutored students on projects and weekly homework/lab assignments for 3 hours per week.

The Daily Californian Projects Developer - *March 2019 ~ May 2020*
- Brainstormed creative content about the Bay Area that could be put on the site with some front-end work.
- worked on the front-end and data collection on a project about the air quality in Berkeley.

Honors and Skills

- VandyHacks 2nd place, Best Use of Google Cloud Award
- Ronald Regan Student Leadership Award & AP Scholar with Distinction

Experienced in: Java, Python, C, HTML/CSS/JS, Spring Framework, Flask, R-Studio, JQuery, React, Electron, MongoDB, MYSQL, and Firebase