Brian Kim

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

Email: s3kim2018@berkeley.edu
Moblie: 510-725-1220

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

Coursework

CS61B: Data Structures, **CS61C:** Machine Structures, **CS70**: Discrete Math and Probability Theory, **Stats134:** Concepts of Probability**, Stats150:** Stochastic Processes, **CS170**: Algorithms, **CS188**: AI, **Math53:** Multivariable Calculus, **Math54**: Linear Algebra, **EE16A**: Designing Information Devices

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 Chess rules implemented.
- Using game trees and alpha beta pruning, built an AI that can look 3 moves forward.

Work Experience

CodeSuite | Software Engineering Intern (Full Stack) - *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 endpoints for user database management and implemented features that allowed users to customize their interview profile.
- Built front end templates for the main, contest, login/register, and problems page.

UC Berkeley | Undergraduate Research Assistant under Prof Sequin - *October 2020 ~ Present*
- Working on sweep generation for a Free Form Surface Generator (NOME)
- Built a sphere, Hyperbola, and Saddle generator which renders the shape with a given radius, angle, and cross section
- Implemented shape sharpening through the Catmull-Clark subdivision algorithm

UC Berkeley | Academic Intern - *January 2019 ~ May 2020*
- Helped 30+ students learn about OOP, Algorithms, and Data Structures.
- Tutored students on projects and weekly homework/lab assignments for 3 hours/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.
- Built software that predicts Berkeley's water supply level in the event of a natural disaster.

Awards

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

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