Brian (Borhan) Rafiq

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Education

University of California, Berkeley

B.A. Computer Science

May 2021 | Berkeley, CA

GPA 3.7

Coursework

Upper Division

- Advanced Algorithms (CS170)
- Operating Systems (CS162)
- Internet Architecture (CS168)
- Computer Security (CS161)
- Database Systems (CS186)
- Artificial Intelligence (CS188)
- Principles of Data Science (CSC100)

Lower Division

- Data Structures (CS61B)
- Discrete Math (CS70)
- Computer Architecture (CS61C)
- Computer Programs (CS61A)
- Linear Algebra (MATH54)
- Designing Information Devices & Systems (EE16B)

Skills

Languages

Python • Java • Go • JavaScript / TypeScript • C • SQL • HTML / CSS

Tools Frameworks

Git • React • MongoDB • SumoLogic • CircleCI • Docker • Pandas • REST APIs • Redis • Jest • Heroku

Experience

Autodesk Inc. | Software Engineer Intern (FE Platform Team)

May 2020 - Aug 2020 | San Francisco, CA

- Implemented entirely new FE and BE deployment tooling in TypeScript for a division of 100+ engineers by integrating a new Slack bot app with GitHub, Heroku, and MongoDB APIs to handle code deployments, freezes, rollbacks, reverts, and more all via slack commands
- Improved BuildingConnected's existing Admin tool for subcontractors and general contractors to better manage their offices and bid projects
- Developed new SumoLogic logging scripts, formed queries, and created dashboards to gather metrics on new tooling to allow my division to better monitor deployment frequency, efficiency, errors, and more
- Overall project work led to a 5x reduction in the time it takes to deploy, rollback, revert code, and the new deployment tooling will be expanded over to other divisions within Autodesk in the near future

Just a Fan's Analysis (JAFA) | Software Engineer Intern

May 2019 - Aug 2019 | London, UK

- Implemented a full-stack dashboard web application in JavaScript using the Amplitude API to fetch and render the company's social media app user engagement data.
- Implemented key features in JAFA's existing iOS app, including liking/disliking features on article posts as well as various, category filtered news feeds for users to visit from their Following pages.

UC Berkeley EECS Department | Academic Intern

Aug 2019 - Dec 2019 | Berkeley, CA

- Instructed weekly labs and office hours, teaching students key concepts, debugging skills, and approaches to complex coding/algorithm problems from the Data Structures and Algorithms (CS61B) course.

Engage3 | Strategy Intern

May 2018 - Aug 2018 | Davis, CA

- Designed an API to integrate Engage3's bug reports in its customer support software, Freshdesk, with its agile workflow software, Assembla, creating and assigning tickets to engineers automatically.
- Discovered a better alternative for a product management platform called ProofHub, and led entire company through a migration from its former platform, Basecamp, to Proofhub, which Engage3 now uses.

Projects

Dominating Set Trees of Minimal Pair-wise Distance Apr 2020

Developed a custom algorithm in Python using NetworkX library to solve NP-Hard problem of finding Dominating Set Trees that minimize pairwise distance on 1000+ input graphs. Placed in the top 40 out of 300 teams in UC Berkeley's Advanced Algorithms (CS170) course.

Secure, Cryptographic File-Sharing System Feb 2020

Implemented BE of a secure file-sharing system in Go using various security schemes and techniques including public-key encryption, symmetric-key encryption, RSA digital signatures, pRNGs, secure hash functions like HMAC, salting, and MACs.

Neural Network for Hand-written Digit Classification Nov 2019

Created a neural network using RISC-V Assembly that classifies images of hand-written digits and outputs the corresponding number. Implemented functions to handle ReLU, ArgMax, Dot Product, Matrix Multiplication, and safely reading and writing image pixel matrices into binary.