Brian (Borhan) Rafiq

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Education

University of California, Berkeley

B.A. Computer Science

May 2021 | Berkeley, CA

GPA: 3.67

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 Programs (CS61A)
- Linear Algebra (MATH54)
- Computer Architecture & Machine Structures (CS61C)
- Designing Information Devices & Systems (EE16B)

Skills

Languages

Python • Java • Go • JavaScript / TypeScript • C/C++ • MySQL • HTML5 / CSS • Unix / Bash

Tools & Frameworks

Git • NodeJS • ReactJS • Redux • MongoDB • SumoLogic • CircleCI • Docker • Pandas • GraphQL • Redis • Jest • Heroku • JSON

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 sizes, wait-times, frequency, efficiency, and errors.
- 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 for C-suite executives to showcase JAFA's social media app's user engagement data fetched via Amplitude API.
- Developed key features in JAFA's existing iOS app using JavaScript and ReactJS, including interactive features (such as liking) 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.