Brian Hsu

Software Engineer

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Work Experience

LiveRamp

San Francisco, California

Software Engineering Intern, Data Management Backend

May 2019 - Aug 2019

- Developed and owned a backend service for a new product, Lookalike Modeling, working under a tight deadline to meet client demands. Unlocked $12 million in at-risk revenue.
- Collaborated across teams, implementing new endpoints to enable easier access to my team's systems.
- Made efficiency improvements to mission-critical applications, and improved visibility into errors by adding fault-detection logic.
- Containerized applications using Docker and Kubernetes, increasing development velocity and enabling scalability.
- Migrated several applications to Google Cloud Platform, as part of a company-wide shift to the cloud
- As part of the Data Management Backend Team, worked on systems to take in, add to, and maintain a massive amount of customer data, segmenting data to enable data-driven marketing.

Algorithms for Computing and Education (ACE) Lab

Berkeley, California

Research Assistant

May 2018 - May 2019

- Working to improve Computer Science education, making it both more accessible and easier to learn, through research into different types of problems.
- Developed a system for automatically grading student submissions at scale safely and efficiently, using Redis and RQ.
- Collaboratively designed and implemented an interactive web application allowing students to solve Parsons Problems, enabling a 80+ student study.
- Analyzed and visualized data, providing insights into the learning efficacy of Parsons Problems.

Education

University of California, Berkeley

Berkeley, CA

B.A. in Computer Science, Minor in English

Aug. 2016 - Dec. 2019 (Expected)

- **Major GPA: 3.78, Cumulative GPA: 3.63**
- **Selected Coursework:**

Introduction to Database Systems
Computer Security
Structure & Interpretation of Computer Programs
Principles & Techniques of Data Science
Efficient Algorithms and Intractable Problems
Introduction to Artificial Intelligence
Machine Structures
Concepts in Computing with Data
Operating Systems
Data Structures
Discrete Math & Probability Theory

Skills

Programming Languages: Java, Python, JavaScript, HTML/CSS, C, SQL, R, Go, RISC-V Assembly
Technologies: MapReduce, React, Git, jQuery, Flask, Redis, UNIX, Spark, Windows
Languages: Fluent in both English and Chinese

Projects

bDocs

- A single-page web application for collaborative, real-time, in-browser rich text and code editing.
- Supports synchronized text editing across multiple users, along with importing text documents, synchronized settings (language, font size) and titles, and displaying recently accessed documents.
- Built using **React** and **Semantic UI**. Backed by a **Firebase** Realtime Database.

PaperJS Parsons

- A fully-featured web application, providing an interface to practice Parsons Problems to master Paper.js, a library that allows for graphics scripting/drawing on HTML5 canvases.
- Allows students to run and see the results of their code in-browser, and displays interactive examples for students to compare the results of their submissions with.
- Developed collaboratively as part of a preliminary stage of research into the efficacy of Parsons Problems, a new type of practice problem introduced to improve computer science education.
- Informed future studies, laying the groundwork for improvements in computer science education both within Berkeley and without.
- Written in **HTML** and **JavaScript**, using the Bootstrap, jQuery, and Paper.js libraries.