Max Kim

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Education

University of California, Berkeley **Expected Graduation:** May 2023
Major: *Data Science* **Minor:** *Computer Science* **GPA:** 3.8/4.0
Current Coursework: Software Engineering, Discrete Mathematics and Probability Theory, Efficient Algorithms & Intractable Problems
Past Coursework: Data Structures & Algorithms, Computer Architecture, Structure & Interpretation of Computer Programs, Artificial Intelligence, Computational Structures, Multivariable Calculus, Principles & Techniques of Data Science, Linear Algebra & Differential Equations, Probability & Mathematical Statistics in Data Science, Probability & Risk Analysis for Engineers

Experience

Amazon Web Services Seattle, CA
Software Development Engineer Intern May 2022 - August 2022
• Designed, developed, and deployed a serverless & scalable end-to-end web app that automates & manages the entire onboarding process for dynamic UI components to be displayed onto existing and new AWS Partner Services through a one-stop portal hosted on an internal domain & authenticated with midway in **ReactJS**, **Redux**, **NodeJS**, **Java**, **Typescript**, **Figma**, **AWS CDK**, **Lambda**, **Cognito**, **DDB**, **S3**, **CF**, **API GW**.
• Accelerated the manual onboarding process by **12x** and wrote unit tests & integration tests for frontend and backend packages with **100%** line and branch coverage using **Jest**, **Mocha**, **Sinon**, and **React Testing Library**.

University of California, San Francisco San Francisco, CA
Undergraduate Research Apprenticeship January 2022 - June 2022
• Developed backend of dashboard for primary care clinicians using **ReactJS** & **D3JS** and Smart on **FHIR API** with researchers at Berkeley Institute for Data Science (BIDS) and clinicians at UCSF to automatically aggregate important patient medical record data in one place.

Willow Labs Berkeley, CA
Data Science Intern January 2022 - March 2022
• Validated performance/generalizability of **Willow Risk API** for stakeholders with stratified sampling & analysis using **GCP**, **SQL**, **Python**.

Empowerly San Francisco, CA
Data Analyst Intern February 2020 - September 2020
• Collaborated with UI/UX developers & CTO for student portal design & wrote schemas for features used by the Empowerly Score model in **Javascript**; analyzed **550+ student** engagement data points to produce statistical reports for marketing team & website using **Python**.

Projects

Mini Git
• Created a version-control system from scratch in **Java** capable of mimicking features of Git such as saving & restoring contents of files, etc.
• Wrote a design document and designed more features such as viewing the history of backups, maintaining sequences of saved contents, and merging changes made in one sequence into another; tested with extensive unit tests using **JUnit** as well as integration tests.

NumC
• Created a mini version of the python library NumPy using **C** with **Intel AVX Intrinsics** and **OpenMP** to vectorize and multithread inputs for matrix operations; optimized matrix multiplication with cache blocking, multithreading, vectorized operations for **65x** more speedup.
• Implemented fast matrix powering algorithm with cache blocking and loop unrolling for **1000x** more speedup in **O(log(n))**.

E@B Mentorship Platform
• Implemented simple mentorship platform with a team of four to facilitate connecting students with mentors throughout the semester for *Entrepreneurs@Berkeley* organization in **HTML/CSS** and **Python** with **Django**; designed overall website/layout & implemented login system.

Teaching & Extracurriculars

UC Berkeley Electrical Engineering & Computer Sciences (EECS) Berkeley, CA
Course Staff Intern - Data Structures & Algorithms January 2022 - Present
• Facilitate labs & office hours by helping students with assignments in **Java** & holding conceptual presentations for a class of **~1600 students**.

Future Business Leaders of America Berkeley, CA
Technical Project Manager - Reebok & Hypebeast January 2020 - December 2021
• Headed contract consultant team to identify key ways to connect with Gen Z for Reebok's **Classic Leather line** by conducting a **100+ response** survey and performing EDA in **Python** using **Matplotlib** & **Scikit-learn**; presented insights to Reebok's U.S. marketing team.
• Headed contract consultant team to analyze price sensitivity and consumer trends in streetwear market in U.S. and China for HBX's team

Skills, Technologies, & Awards

• **Languages:** Java, Python, TypeScript/JavaScript, C, Ruby, SQL, HTML/CSS, RISC-V, Scheme
• **Technologies:** ReactJS, NodeJS, Git/GitHub, Redux, Figma, Jest, Mocha, Sinon, React Testing Library, JUnit, Pandas, NumPy, GCP, AWS
• **Societies & Awards:** VP of Ops for Entrepreneurs@Berkeley, CSUA Member, Baidu x Voyager Consulting Case Competition 2nd place