Max Kim

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EDUCATION

University of California, Berkeley   Aug. 2019 – May 2023
Bachelor of Arts, Computer Science   *Cumulative GPA: 3.73*
Coursework: Software Engineering, Computer Security, Data Structures & Algorithms, Computer Architecture,
Structure & Interpretation of Computer Programs, Discrete Mathematics and Probability Theory, Artificial Intelligence,
Natural Language Processing, Principles & Techniques of Data Science, Linear Algebra & Differential Equations

TECHNICAL SKILLS

Languages: Python, Java, TypeScript/JavaScript, Golang, C, Ruby, SQL, HTML/CSS, RISC-V, Scheme
Technologies: ReactJS, NodeJS, Figma, Jest/Mocha/Sinon, React Testing Lib, JUnit, Pandas, NumPy, Git, AWS

EXPERIENCE

Software Development Engineer Intern   May 2022 – August 2022
Amazon Web Services   *Seattle, CA*
- Developed & deployed a serverless & scalable end-to-end web app to production hosted on an internal domain &
  authenticated with midway that automates & manages the entire onboarding process for dynamic UI components
  to be displayed onto existing and new AWS Partner Services using **ReactJS, Redux, NodeJS, Java,
  Typescript, Figma, AWS CDK, Lambda, Cognito, DDB, S3, CF Signer, 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

Course Staff Intern | Data Structures & Algorithms   Jan. 2022 – Dec. 2022
UC Berkeley Electrical Engineering & Computer Sciences (EECS)   *Berkeley, CA*
- Facilitate labs & office hours by helping students with assignments in Java, fixing bugs & making adjustments to
  class projects, & holding conceptual presentations on DSA topics for a class of 1600+ students

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

Data Analyst Intern   Feb. 2020 – Sept. 2020
Empowerly   *San Francisco, CA*
- 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 reports for marketing team & website using **Python**

PROJECTS

Mini Git | *Java, JUnit*
- Created a version-control system mimicking features of **Git** such as init, add, commit, merge, branch, & checkout
- 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 unit & integration tests

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

Dropbox Lite | *Golang*
- Designed & developed an end-to-end encrypted file sharing system with secure user authentication and features
  such as saving, loading, overwriting, appending, sharing, and revoking access to files
- Utilized Hash-Based Message Authentication Code (HMAC) to maintain integrity of files, Argon2 to prevent
  brute-force attacks on user authentication, RSA-OEAP for public key encryption, AES-CTR mode to ensure
  confidentiality of files, digital signatures for authenticity, and other SOA cryptographic algorithms
- Wrote an extensive design document and tested client application API functionalities with basic and fuzz testing