ANDREW CHEN

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EDUCATION

University of California, Berkeley Expected May 2023

Bachelor's in Computer Science, Senior, GPA: 3.83/4.00

Selected courses: Parallel Computers (Graduate), Operating Systems, Databases, and Advanced Algorithms

EXPERIENCE

Two Sigma - Software Engineering Intern May 2022 - Aug. 2022
Go, Kubernetes, GCP, Elasticsearch, Kibana New York, NY

- Created a capacity informer for Kubernetes Engine clusters, which revealed a **500TB+** memory bottleneck and enabled the tracking of previously invisible scheduling errors affecting **100s** of critical trading simulations
- Designed service to intelligently maximize insight from heavily limited data, be testable, configurable, and robustly handle unpredictable and frequent external errors
- Gathered feedback from users to best design Kibana visualizations and scope project features

Apple - Software Engineering Intern May 2021 - Aug. 2021
Java, React, Kotlin Vert.x, AWS DynamoDB Cupertino, CA

- Performed fullstack development as part of Apple Health Special Projects and created a scalable and extensible microservice which collects user feedback and serves training data to ML models
- Engineered service to efficiently use DynamoDb and considered trade offs for different technologies as part of design

NVIDIA - Software Engineering Intern Jan. 2021 - May 2021
TypeScript, React, Redux, Redux-Saga, Jest Santa Clara, CA

- Reduced search speeds and loading times from **4.6secs to 0.2secs** by prefetching, caching, and paginating API calls, lazy loading components, and dynamically changing image resolutions
- Took initiative to perform code reviews and developed the backend and frontend for an ads management system

Wind River Systems - Software Engineering Intern June 2020 - Dec. 2020
Vue.js, Vuex, Quasar, Firebase Alameda, CA

- Improved loading times by **2.2secs** (**208%** performance increase) on the main page according to Lighthouse by refactoring to use Vuex caching, modularizing the codebase, and using lazy loaded routes
- Optimized and implemented features for a project sharing platform and emphasized maintainability by developing error handling tools and writing documentation

D-Lab - Research Apprentice Sept. 2020 - Dec. 2020
Python, Docker Berkeley, CA

- Developed a web-scraper for computational research using Scrapy and Beautiful Soup
- Streamlined team's development by dividing the project into a multi-container Docker app
- Proposed and implemented text processing and a MongoDB pipeline to efficiently parse **100s** of websites

UC Berkeley EECS Department - Academic Intern Sept. 2019 - May 2020

- Mentored 20 students by explaining topics such as Java, Python, regex, graph algorithms, and debugging

PROJECTS

Operating System – C

- Designed and developed process control syscalls and a strict priority scheduler to build a multi-threaded operating system

RelationalDb – Java, JUnit

- Implemented multiple granularity locking for concurrency control, B+ tree indexing, and join and query optimization
- Built a database system over several months to facilitate a more intimate understanding of databases

SKILLS

Languages	Python, C/C++, Go, JavaScript, TypeScript, Java, Kotlin, HTML, CSS
Tools/Frameworks	React, Vue.js, Git, Docker, Redux, Ruby on Rails