Jason Keung

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EDUCATION

University of California, Berkeley **August 2018 - May 2022**

- B.A. in **Computer Science** and **Applied Mathematics**
- Relevant Coursework: Software Engineering, Machine Learning, Artificial Intelligence, Algorithms, Computability and Complexity, Optimization Models, Data Structures, Machine Structures, Probability and Random Processes, advanced upper division math classes

PROFESSIONAL EXPERIENCE

Wealthfront | Software Engineer, Backend December 2024 - Present

- Developed **2** new investment products, frequently deploying to **8+** Java services, **3** database clusters, and client-facing APIs
- Led a team of **14** engineers, PM, and designers on an Automated Bond Ladder feature from ideation to launch, leading to **$6M** in deposits
- Handled on-call for all account dashboards, Yodlee account linking, GreenDot debit cards, automated savings plans, onboarding flows
- Aggressively identified and automated away toil from on-call pages to scalably support **1.4M** active accounts/**1M** clients for the rotation

Aurora | Software Engineer June 2022 - November 2024

- Designed and implemented new release management service to support **3+** teams building **100+** releases/day with Golang, GRPC, GORM
- Led the rewrite of a legacy release management React app to a new consolidated "developer hub", reaching feature parity within **4 weeks**
- Owned and maintained developer remote desktop service, developing metrics and saving **$32,000 (17%) per month** for **800+** users
- Delivered a full-stack feature across **3 services** that parsed and prioritized autonomy changes from Git to vehicle operators to test drive

Aurora | Software Engineer Intern May 2021 - August 2021

- Saved Aurora ~**$384,000 per month** on developer cloud computing costs, heavily using AWS on a Developer Platform team
- Stopped developer's instances after a default time period using AWS CloudWatch event rules and allowed for shutdown time extension
- Enabled migration for **800+** users by supporting EBS volumes to be portable between instances and various instance types

Amazon | Software Development Engineer Intern June 2020 - August 2020

- Machine Intelligence and Decision Analytics for Search: improved Amazon.com product search results with continuous machine learning
- Built AWS Step Functions pipeline for Amazon search bar behavioral feature dataset expansion, handling **hundreds of millions of rows**
- Decreased the daily runtime to process this dataset **8 to 14 times faster** using PySpark + AWS Elastic MapReduce, from ~**8 hrs to 35 min**
- Merged machine learning model output with the current dataset using AWS Lambda + S3, Python, a trained regressor, and Pandas

SKILLS

Languages and Tools: Java, Python, Golang, C++, C, React, Redux, Javascript, Maven, Bazel, Terraform, Spacelift, Numpy, Spark, Pandas
Backend Databases and APIs: Hibernate, Flask, FastAPI, SQLAlchemy, gRPC, GORM, Postgres, MariaDB, Firebase
Amazon Web Services: AWS Autoscaling Groups, CloudWatch, Lambda, EC2, S3, EBS, Elastic MapReduce, Step Functions, Batch
ML/Data Science Methods: Convex optimization, regression/classification models, dimensionality reduction, clustering
Other: Jenkins, Buildkite, Spinnaker, Kubernetes, Docker, Grafana, Amplitude Event Tracking, Monorepo, Jira, Agile, REST

PROJECTS + EXTRACURRICULAR

Project: Stock Trading Algorithm Backtest Framework | Lead Developer | *Data Science Society @ Berkeley* Fall 2021

- Designed and led development of a Python backtesting framework built from scratch, pulling Yfinance data and writing trading strategies
- Defined abstract Order, Trader, and Ticker symbol classes to facilitate each member's development of their own trading algorithms
- Evaluated algorithm performance by simulating trades and calculating average market returns, alpha, and portfolio and net asset values

Fansure | Contract Data Analyst | *Data Science Society @ Berkeley* Spring 2021

- Categorized NBA and MLB articles into relevant teams for Fansure, a sports-betting startup providing insights at scale
- Produced Python NLP model to categorize 100+ hand-tagged articles and achieved **95% accuracy** for NBA and MLB team classification

SoFi | Contract Data Analyst | *Data Science Society @ Berkeley* Fall 2020

- Performed competitive analysis on personal finance apps for SoFi, a financial technology unicorn company based in San Francisco
- Implemented transaction graph prototypes and recurring transaction prediction using Pandas DataFrames, Matplotlib, Bokeh
- Categorized **600,000+** transactions with a dictionary mapping and created an NLP model for rows with missing data using fuzzy matching

Computer Science Mentors | Section Instructor for Discrete Math and Probability Theory | Rated 4.85/5 September 2019 - May 2021

UC Berkeley EECS Department | Academic Intern for two introductory CS courses January 2019 - August 2019

- Taught 20+ students object oriented programming, recursion, data structures/algorithms, and graph traversals in sections and office hours