

# Jason Keung

[linkedin/jasonkeungg](#) | [github/jasonkeung](#) | [jasonkeung@berkeley.edu](mailto:jasonkeung@berkeley.edu)

## EDUCATION

University of California, Berkeley

August 2018 - May 2022

- B.A. in **Computer Science** and **Applied Mathematics**, concentration in Computer Science
- 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

Aurora | Software Engineer

June 2022 - Present

- Migrated frontend codebase of a release management app into React/Redux/Golang app, reaching feature parity within **4 weeks**
- Designed, implemented, and deployed changes to developer cloud machine service, saving ~**\$32,000=17% per month** for **800+** users
- Delivered and owned a full-stack feature across **3 services** that informed AV operators of autonomy behavior changes to test-drive safely
- Fulfilled critical KLO and maintenance work independently as part of the CI/Release team and build infrastructure on-call rotation

Aurora | Software Engineer Intern

May 2021 - August 2021

- Saved Aurora ~**\$384,000 per month** on developer cloud computing costs on a Developer Platform team
- Improved the cloud desktop website on AWS Lambda using Python and Terraform, **heavily using AWS** developer tools with boto3
- Stopped developer's instances after a default time period using AWS CloudWatch event rules and allowed for shutdown time extension
- Allowed developers to seamlessly switch between instance types using EBS volumes to save user data, enabling migration for **800+** users

Amazon | Software Development Engineer Intern

June 2020 - August 2020

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

## SKILLS

**Languages and Tools:** Python, Java, Golang, C++, C, React, Redux, Javascript, Git, Numpy, Spark, Pandas, Bazel, Terraform, Spacelift

**AWS Developer Tools:** AWS Autoscaling Groups, CloudWatch, Lambda, EC2, S3, EBS, Elastic MapReduce, Step Functions, Batch

**Data Structures, Algorithms, Optimization, Data Science and Machine Learning Methods**

- Heuristic algorithms, advanced data structures, space/time complexity analysis, search algorithms
- Convex optimization, classification methods, regression techniques, dimensionality reduction, clustering

**Linux, Buildkite, Flask, SQLAlchemy, Postgres, Spinnaker, Docker, SSH, Monorepo, Jira, Agile**

## PROJECTS + EXTRACURRICULAR

Stock Trading Algorithm Backtest Framework | Lead developer in a group

Fall 2021

- Designed and led development of a Python backtesting framework built from scratch, pulling Yfinance data and writing trading strategies
- Created 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
- Created an NLP model using Pandas, article parsing, weighted counts, and SportRadar API data to output relevant teams from text articles
- Wrote an automated Python CLI script to categorize 100+ hand-tagged articles and achieved **95+% accuracy** for NBA and MLB

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 | Senior Mentor for Discrete Math and Probability Theory

September 2019 - May 2021

- Taught sections on graph theory, polynomial secret sharing, RSA encryption, and discrete/continuous probability; **overall rating: 4.849**

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