

Jonathan Fung

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Education

University of California, Berkeley

May 2020

B.S. Electrical Engineering and Computer Sciences

GPA: 3.90/4.0 (High Honors)

Regent's and Chancellors Scholarship (Top 2% of Incoming Class)

HKN EECS Honor Society (Top 25% of Junior Class)

Selected Classwork:

- CS: Machine Learning*, Operating Systems, Compilers, Security, Networking, Algorithms, Databases, Computational Photography
 - EE: Convex Optimization, Digital Signal Processing, Signals and Systems*, Magnetic Resonance Imaging
- (* – Course Staff)

Skills

- Infrastructure
- Metrics Systems
- Developer Productivity
- Signal Processing, Linear Systems
- Convex Optimization
- Java
- Python
- C / C++
- Scala
- Ruby

Awards

- Accel Scholars (2018 Cohort)
Industry Mentorship Program run by VC firm Accel
- Kleiner Perkins Engineering Fellow (2019 Cohort)
Fellowship Program run by VC firm Kleiner Perkins
- Jane Street Electronic Trading Contest 2018 1st place
- Calhacks 2016 (Social Impact Award)

Experience

Scale AI – Software Engineer

June 2020 – Present

- Built out the task linting system. Productionized ML-based async linters. Rolled out metrics library to increase systems observability and deployed first code search tool. Developed various task pipelines, including the video stitching, 3D Lidar labeling, and ML Prelabeling pipelines.

Pinterest – Software Engineering Intern (Infrastructure), Kleiner Perkins Fellow

May 2019 – Aug 2019

- On the Visibility team, working with logging and metrics. Built metrics reporting pipeline to support accurate, t-digest based by-host aggregation methods. Processing 8 million metrics per second.
- Reduced infrastructure costs by \$1.2 Million per year through a 99% reduction in metrics storage.
- Project featured on the Pinterest Engineering Medium blog.
post: [jonfung.me/mediumpost](https://medium.com/@jonfung/pinterest-engineering-medium-blog)

Stripe – Software Engineering Intern (Dev Tools)

May 2018 – Aug 2018

- On the Developer Productivity team. Implemented Ruby enums in Stripe's code for the Ruby Typechecker project (Sorbet). Code refactored ~2,000 modules to a new enum format.
- Integrated VSCode IDE with Sorbet. Some features include Jump-to-Definition, Type-on-Hover.

Computational Imaging Lab – Undergraduate Researcher

Aug 2018 – Jan 2020

- Working with optimization models and optics to perform lensless imaging, allowing for the reconstruction of 3-D images from a single shot with the aid of a diffuser.

UC Berkeley EECS Department – Undergraduate Student Instructor

Jan 2019 – May 2019

- CS189/289A (Machine Learning) SP19 Course Staff
- EE120 (Signals and Systems) FA18 Course Staff

Berkeley CodeBase – Vice President of Operations

Aug 2017 – May 2019

- Early executive member for software development consulting group. Previous clients: Atlassian, HackerRank.

Projects

PinGREP – Pinterest's real-time source code search tool

July 2019

- Pinterest Hackathon 2019. Productionized internal forks of open source projects to provide real-time source code search across all source repositories with double-digit millisecond median query latency.
- Fully integrated with Pinterest internal services. Implemented as a scalable, fault-tolerant service mesh with load balancing, internal auth, and multi-zone redundancy.
(made fast ctrl-f across whole codebase)

mp3-fft – Headphone recommender using fourier transform on music

July 2017

- Application that takes mp3 files and recommends 100+ headphones based on price, form factor, and music sound signature (bass-heavy, neutral, mid-forward, v-shaped).
- Uses the Fourier Transform and Welch's method to generate a power spectral density estimation of the song and classify sound signature.
site: jonfung.me/mp3-fft