Jonathan Fung

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Education

University of California, Berkeley

Expected May 2020

B.S. Electrical Engineering and Computer Sciences
GPA: 3.9/4.0 (Dean's Honors List)
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*, Algorithms, Databases, Computational Photography
- EE: Convex Optimization, Digital Signal Processing, Signals and Systems**
- Graduate-Level: Linear System Theory*, Magnetic Resonance Imaging

(* – In Progress, ** – 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

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

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 under Laura Waller*

Aug 2018 – Present

- 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 – *CS189/289A (Machine Learning) Course Staff*

Jan 2019 – May 2019

- Responsible for grading homeworks and exams. Topics covered include support vector machines, gaussian discriminant analysis, various regressions, and dimensionality reduction techniques.

UC Berkeley EECS Department – *EE120 (Signals and Systems) Teaching Assistant*

July 2018 – Jan 2019

- Responsible for leading weekly discussion section, office hours, grading homeworks and exams, creating new content material. Topics covered include Fourier series/transforms, time series analysis, control systems, and filter designs.

Berkeley CodeBase – *Vice President of Operations*

Aug 2017 – May 2019

- Executive team for software consulting club developing software products for high-growth start-ups around the Bay Area. Previous clients include Atlassian and 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