Jonathan Fung

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Education

University of California, Berkeley
8/16-5/20 (exp)

- B.S. Electrical Engineering and Computer Sciences
- Overall GPA: 3.9/4.0 (Dean's Honors List)
- **Regents and Chancellors Scholarship Recipient** – Top 2% of Incoming Class
- **HKN EECS Honor Society** – Top 25% of Junior Class
- Relevant CS Coursework: Algorithms, Data Structures, Machine Learning, Computer Architecture, Discrete Math and Probability Theory, Computational Photography, Linear Algebra, Multivariable Calc
- Relevant EE Coursework: Convex Optimization, Digital Signal Processing, Signals and Systems

Experience

Software Engineering Intern @ Stripe
5/18 - present

- Working on the **Developer Productivity** team. Focusing on large-scale code refactors, product infrastructure, developer tools, and maintaining scalability of Stripe's code.
- **Implementing Ruby enums** in Stripe's code as part of a long-term project to increase code quality via building a Ruby Typechecker (Sorbet). Rewriting ~2,000 existing modules to a new enum format.
- Working on VSCode **IDE integration** with Sorbet. Features include Jump-to-Definition, Type-on-Hover

Undergraduate Student Instructor @ EE120 (Signals and Systems)
7/18 - present

- Responsible for leading weekly discussion section, office hours, grading homework and exams as well as creating new content material and administrative duties.

Software Engineering Intern @ Trimian, Inc.
5/17-8/17

- Wrote cron jobs to refactor the **Neo4j** graph database using the **Cypher Query** language, **Javascript**, and **NodeJS.** Experimented with Neo4j graph traversal methods to create a personalized user onboarding experience. Created internal admin dashboards to analyze live Parse Server Data.

Vice President of Operations @ Berkeley Codebase
8/17- present

- Overseeing budget and logistics for Codebase, a software consulting club at Berkeley.
- Previous projects include creating an automated backend for UC Berkeley's phone systems with local startup Aybell and an user management portal for San Francisco financial tech startup Beam.
- Technologies used include PostgreSQL, GraphQL, Graphile, Flask, NodeJS, GCP, React.

Research Intern @ Stanford University Radiology Dept.
5/14-8/16

- Devised and conducted an independent research project on **self-assembling nanoparticles.** Published papers in **Journal of Nuclear Medicine & ACS Nano**, gave multiple poster presentations.
- Helped coordinate a week long nanoparticle summer camp for visiting undergraduate students.

Projects

mp3-fft – Headphone recommender using fourier transform on music
7/17

- 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

Ethos – Chrome extension that reports bias in articles via IBM Watson
9/16

- Winner of **CalHacks 3.0 Best Social Impact Hack**
- Analyzes articles for their level of objectivity and bias using NLP from the IBM Watson API. Aggregates author data to display bias profiles. **Real-time Facebook overlay** that analyzes newfeed articles while scrolling through a news feed.   src: jonfung.me/ethos

Publications

- Synthesis, Characterization and Biomedical Applications of a Targeted Dual-Modal NIR-II Fluorescence and Photoacoustic Imaging Nanoprobe.   (Pub. with Kai Cheng, ACS Nano)
  7/17
- Dual-Modal NIR-II Fluorescence and Photoacoustic Imaging of Thyroid Carcinoma Using EGFR-targeted Donor-Acceptor Chromophore Based Nanoprobes (Pub. with Kai Cheng, ACS Nano)
  5/16
- Surface Specific Rationally Self-Assembling Au-Fe Oxide Nanoparticles: A Potential Multi-Modal Imaging Agent Platform for Early Tumor Diagnosis   (posters: bit.ly/2o4W9CW)
  5/14-8/16

Awards

- **Jane Street ETC 2018** – First Place (Electronic Stock Trading Competition)
- **Accel Scholars, 2017-2018 Cohort** – 25 recipients. (Accel Venture Capital)

Skills

- Languages: Java, Python, Ruby, Javascript, C, C++, Matlab
- Hobbies: Gardening, Marathons, Disney Pin Collecting