Jonathan Fung

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Education

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

- B.S. Electrical Engineering and Computer Sciences
- Departmental GPA: **4.0/4.0** / Overall GPA: 3.96/4.0 (Dean's Honors List)
- Regents' and Chancellors Scholarship Recipient (Top 2% of Incoming Class)
- Highlighted Topics/Coursework:
  - Data Structures
  - Discrete Math, Probability Theory
  - Algorithms (exp)
  - Multivar Calc
  - Circuits, Control Theory, Basic Filter
  - Machine Architecture (exp)
  - Linear Algebra
  - Discrete Time Signal Processing
  - Signals and Systems (exp)

Skills

- Java, Python, Javascript, Matlab, Cypher/Neo4j Graph, Parse Server, Node.js, NumPy/SciPy

Experience

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

- Created an internal admin dashboard to analyze **Parse Server data**, wrote cron jobs to update the Neo4j graph database using **Javascript, Cypher, Node.js, HTML/CSS**
- Implemented in-app-purchases through Adobe PhoneGap.

Contract Developer @ Berkeley Codebase — 8/17- present

- Part of a student organization helping local high-growth bridge technical challenges.
- Building a backend/UI for UC Berkeley's automated phone systems with Visimenu.

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

- Devised and conducted independent research project on **self-assembling nanoparticles.**
- Assisted with lab group research projects and the execution of a week long nanoparticle summer camp for visiting students.
- Published papers in **Journal of Nuclear Medicine & ACS Nano**, gave multiple poster presentations.

Publications & 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 or bias using NLP from the IBM Watson API. Author's past article data is compiled, gauged, and cached in a server to determine overall author bias. **Real-time Facebook scraper** that analyzes newfeed articles while scrolling through a news feed. src: jonfung.me/ethos

Synthesis, Characterization and Biomedical Applications of a Targeted Dual-Modal NIR-II Fluorescence and Photoacoustic Imaging Nanoprobe — 7/17

- To be published with Zhen Cheng, Kai Cheng in ACS Nano. Under Peer Review.

Dual-Modal NIR-II Fluorescence and Photoacoustic Imaging of Thyroid Carcinoma Using EGFR-targeted Donor-Acceptor Chromophore Based Nanoprobes — 5/16

- Published with Kai Cheng in Journal of Nuclear Medicine paper: bit.ly/2mBhSBp

Surface Specific Rationally Self-Assembling Au-Fe Oxide Nanoparticles: A Potential Multi-Modal Imaging Agent Platform for Early Tumor Diagnosis — 5/14-8/16

- Independent Research Project posters: bit.ly/2o4W9CW