

# 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
- 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 Design • 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-present

- 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.

### 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 paper in **Journal of Nuclear Medicine**, 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](http://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](http://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](http://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](http://bit.ly/2o4W9CW)