

Nathan Wong

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EDUCATION

College of Engineering
University of California, Berkeley
Sep 2017 - May 2021

EXPERIENCE

Conboy Lab
Berkeley, CA
May 2018 - Present

Quantgene, Inc.
Berkeley, CA
Mar 2018 - Aug 2018

PROJECTS

Freeflow
Video: <http://bit.ly/freeflow0-1>
Jan 2019 - Present

Flashing Abacus
Src: <http://bit.ly/f-abacus>
Jan 2017 - Jun 2017

ORGANIZATIONS

Splash at Berkeley
Berkeley, CA
Sep 2017 - Present

UC Berkeley Hall Association
Berkeley, CA
Sep 2017 - May 2018

SKILLS

Programming

Design & Presentation

Computer Science and Bioengineering @UC Berkeley

- Relevant coursework: Multivariable Calculus, Linear Algebra and Differential Equations, Python: Structure and Interpretation of Computer Programs, Java: Data Structures, Linux System Administration, Introduction to Computational Biology
- Affiliations: Bioengineering Honor Society (BioEHS), AFX (Berkeley Dance Community)
- GPA: 3.8/4.0 (Dean's Honor List)

Computational Biology Research Intern @Conboy Lab at UC Berkeley

- Assisted in a CRISPR/CAS9 gene-editing project, utilizing the Biopython library, over the summer (2018) as a paid undergraduate researcher.
- Created a flow cytometry analysis tool to differentiate cell states, utilizing a Python-Flask server and classification models, including random forest (RF) and multi-layer perceptron (MLP).

Web Platform Development and Research Intern @Quantgene

- Developed internal talent recruitment, skill development, and resource sharing platform running on AWS, using Moodle and PHP backend.
- Used KEGG, Gene Ontology (GO), NCBI BLAST, Pfam and other bioinformatics databases to create slides and whitepapers detailing biochemical processes of cell death, cancer, and cellular senescence.

Freeflow: Flow Cytometry Analysis Tool

- Languages / Frameworks: Python (Flask, SQLAlchemy, SciPy, TensorFlow, Bokeh), uWSGI-Nginx
- Application that takes flow cytometry data files (FACS / FCS files) and provides statistical analysis and visualization options (scatterplots, histograms, box-whisker diagrams, correlation tables) for user-selected fluorescence channels.

Flashing Abacus: Arithmetic Practice Tool

- Language: JavaScript
- Application that takes user-specified difficulty levels (size, speed, and scope of problems), displays a series of arithmetic problems, and allows users to check their answers dynamically.

Web Development Teacher and Event Administrator @Splash at Berkeley

- Created slides, handouts, and examples for a two-hour introductory web development course, and instructed classes of over 60 high school students.
- Directed outreach efforts and organized day-of logistics for over 500 high school students and 61 unique classes as a signatory for this NSF-funded program.

President of Hillside Hall Association @UC Berkeley Residential Unit 4

- Managed a \$12,000 budget and directed the executive Hall Association board in weekly meetings to host welcoming parties and plan university-promoted events for over 750 residents.
- Worked directly with university officials to enforce community standards, and ensure a safe environment for residents.

Python (Flask, Scikit-learn, Pandas, NumPy, Matplotlib)

Java

Unix server administration (Digital Ocean, AWS, Google Cloud)

HTML/CSS/JavaScript

Adobe Illustrator, Photoshop

Microsoft Excel, Powerpoint

Video Editing: Adobe Premiere Pro