

Melton Zheng

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Education

2018-2022 **University of California, Los Angeles** Los Angeles, CA
Computational and Systems Biology GPA: 3.94

Experience

- 2020-2022 **Afya Global** Redlands, CA
Full Stack Developer
- Developed automated ANSI X12 837P formatted transactions reimbursing on average \$18,000 per month for the California Correctional Health Care Services (CCHCS)
 - Parsed and organized 2 million patient records from the Inland Empire Health Plan, Health Plan of San Joaquin, Los Angeles Care, and Riverside San Bernardino County Indian Health
 - Streamlined the upload of 1.5 million patients to our database from 108 hours to 14 minutes by using multi-threading processing and concurrent code using the `async/await` syntax
 - Improved data visibility by 14 fold of patient-physician interactions by automating report extraction and formatting from our virtual platform on a daily basis
 - Implemented LAMP application (Linux, Apache, MySQL, Python) on Ubuntu 22.04 LTS to host OpenEMR system and run automated scripts, resulting in annual savings of \$3837.84
- 2021-2022 **University of California, Los Angeles** Los Angeles, CA
Ardehali Laboratory Assistant
- Visualized the data for differentially expressed genes and first and second heart field clusters for 60,000 stem cell-derived cardiomyocytes using Python packages Jupyter Notebook and Scanpy
 - Processed over 60 Gb FASTQ files containing single cell RNA sequencing data, using kallisto and loompy, in order to visualize cell trajectory and pseudotime based on alternative splicing
- 2019-2021 **University of California, Los Angeles** Los Angeles, CA
Wollman Laboratory Assistant
- Evaluated the accuracy of a machine learning segmentation algorithm Cellpose with an average accuracy of 65% compared to absolutely precise segmentation based on brightfield
 - Trained over 200 logistic regression models for pattern recognition in features of a Caspase 8 level experiment and discovered increase from the area under the receiver operating characteristics curve or AUC of 0.85 given more data points
 - Segmented over 2000 cells on different types of fluorescent probes
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Skills

- HTML, CSS, Javascript (including React JS, Node JS, and Next JS)
- Python
- C++
- SQL