

James Fu

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EDUCATION

University of Texas, Austin

M.S. in Data Science

Expected Dec 2025

- Cumulative GPA: 4.0/4.0
- Coursework: Machine Learning, Natural Language Processing, Statistics

University of California, Los Angeles

B.S. in Computational Biology (Data Science Track)

Jun 2024

- Cumulative GPA: 3.72/4.0, Dean's List
- Coursework: Machine Learning, Data Science, Data Structures and Algorithms, Discrete Mathematics, Probability

RELEVANT EXPERIENCE

UCLA Semel Institute

Student IT Technician

Nov 2022 – Feb 2024

Los Angeles, CA

- Imaged and encrypted 100+ HIPAA-compliant Windows and Mac PCs and upgraded computer hardware.
- Enhanced network infrastructure for 150+ offices by utilizing batch scripts and Excel to gather PC specs, identify units needing replacement, and optimize connectivity and hardware utilization.

Silicon Valley Education Foundation (Computer Science Institute)

Teaching Assistant

Jun 2022 – Aug 2022

San Leandro, CA

- Led 30+ high school students through basic to intermediate Python activities using Adafruit's Circuit Playground Express.
- Developed 10+ interactive lessons on basic data structures, OOP, and project deployment in GitHub; conducted live coding demonstrations, debugged student code, and supervised project development for a final showcase.

TECHNICAL SKILLS

Programming Languages: Python (scikit-learn, numpy, pandas), R (dplyr, ggplot2), C/C++, JavaScript, MATLAB, HTML/CSS

Data Science and Miscellaneous Tools: Data science pipeline (cleaning, wrangling, visualization, modeling, interpretation), Statistics, Experimental design, Hypothesis Testing, Data Structures and Algorithms, OOP, ETL (SQL), APIs, Excel, Git, React

PROJECTS AND LEADERSHIP

K-Means Clustering for Astrocyte Subtype Quantification [[paper](#)] [[code](#)]

Zipursky Lab | Advisors: Dr. Larry Zipursky, Dr. Fangming Xie

Sep 2023 – Jun 2024

Los Angeles, CA

- Identified six layer-specific astrocyte subtypes by developing a machine learning pipeline that clustered spatial cell data (MERFISH) from the Allen Mouse Brain Atlas and validated subtype feasibility by implementing Support Vector Machines (SVM).
- Discovered 104 astrocyte-specific genes via differential gene expression analysis on 1,122 total genes across 10+ million cells, applying Bonferroni correction to ensure statistical significance.

Build Team Project Manager [[website](#)]

UCLA Biomedical Engineering Society (BMES)

Jun 2023 – Jul 2024

Los Angeles, CA

- Directed a team of 35 undergraduate students to develop a full-fledged pulse oximeter project through hands-on experience in Arduino (C++) and Processing (Java) programming, circuitry, and computer-aided design over the course of a year.
- Assisted with developing content for weekly modules and hands-on workshops, created starter code for students' to build upon, and spearheaded project funding applications to facilitate procurement of necessary supplies.

Equitable Healthcare Cost Modeling through Deep Learning

Faircare | LA Hacks

Apr 2024

Los Angeles, CA

- Developed an accessible, user-friendly healthcare cost modeling website to assist users in finding nearby and equitable out-of-pocket treatments. Integrated text-to-speech and a simple interface tailored for older adults.
- Implemented and trained a Python neural network using Pytorch and Keras to predict out-of-pocket versus insured costs, optimizing metrics such as MSE/RMSE and F1 score through experimentation with different network configurations and data inputs such as healthcare provider and location.