

Martin Bourdev

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Education

University of California, Los Angeles

B.S. in Bioengineering, Bioinformatics minor (GPA: 3.82)

Los Angeles, CA

October 2020 – June 2024

Work Experience

Amgen

Process Development Intern

Thousand Oaks, CA

June – September 2023

- Developed multiple novel SOPs for purifying residual protein from drug substance, including precipitation and size-exclusion chromatography, enabling a new method for drug production.
- Verified high protein recovery and drug removal using colorimetric protein assays and HPLC.

International Flavors and Fragrances

Bioscience Intern

Palo Alto, CA

June – September 2022

- Successfully developed novel CRISPR/Cas9 plasmid and methods for *B. subtilis* mutagenesis.
- Received the Employee Recognition Award for independent experiment design and execution.

Zoetis

Production Intern

Union City, CA

June – September 2021

- Led a project eliminating sources of error in chemical bead production, designing production SOPs.
- Wrote a Python program to model data and predict yield rates using machine learning.

Research

UCLA Health Abramson Lab

Non-Clinical Volunteer

September 2021 – Present

- Developed methods to purify and characterize the BDH2 enzyme in yeast.
- Mastered cell culture, yeast propagation, PCR, gel electrophoresis, and fermentation.
- Recorded over 200 volunteer hours.

Leadership Experience

UCLA Biomedical Engineering Society

Permanent Cell Team

October 2020 – June 2021

- Mastered the fundamentals of wet lab research: cell culture, immunostaining, and Western blots.
- Conducted independent research focused on the rate of insulin degradation.

UCLA CruX Neurotechnology

Brain-Computer Interface Team Lead

October 2020 – June 2023

- Led a team of 8 undergraduate students in a project to measure cognitive load from EEG signals.
- Educated team members on signal processing techniques in Python: bandpass filters, Fourier transform, power spectral density, artifact rejection.

Skills

Software

Python, C++, Java, SolidWorks, Machine Learning, Signal Processing, Algorithms, Data Structures

Wet Lab

Cell Culture, PCR, DNA Gel, Protein Gel, *E. coli*, *B. subtilis*, Plasmid Construction, CRISPR/Cas9

Neurotech

OpenBCI, Spectral Power, Wiener Filter, Kalman Filter

Hobbies

Distance Running, Brewing, Reading, Mandarin