

# Jake Barer

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## EDUCATION

**University of California, Berkeley, Berkeley, CA**

**Expected:** May 2025

Bachelor of Science in Chemistry

**GPA:** 3.62/4.0

Bachelor of Art in Data Science, Concentration: Computational Methods in Molecular and Genomic Biology

**Relevant Coursework:** Quantum Mechanics, Numerical Algorithms Applied to Computational Quantum Chemistry, Genetic Design Automation, Intro to Machine Learning

## SKILLS

**Laboratory Techniques:** NMR, IR, UV-Vis, HPLC, SEM, AFM, Raman Spectroscopy

**Programming Languages:** Python (pandas, scikit-learn, PyTorch), R (dplyr), SQL, Java, HTML, CSS

**Software:** Microsoft Office Suite: Word, Excel, PowerPoint, Google Workspace, Git, GitHub, Tableau

## RELATED EXPERIENCE

**General Dynamics Information Technology**

*June 2024 - August 2024*

Data Analyst Intern

*Remote*

- Synthesized client data with 1M+ entries and cleaned, prepped, and joined as needed using Tableau Prep
- Visualized data using Tableau to discover how to optimize and improve healthcare enrollment processes
- Utilized advanced Tableau features to implement interactive dashboards to present to the client
- Delivered reports and recommended new healthcare enrollment processes to non-technical clients

**Baranger Group, UC Berkeley**

*September 2023 - Present*

Undergraduate Research Assistant

*Berkeley, CA*

- Designed interview protocol and coded interview responses to categorize and present qualitative data
- Analyzed large sets of data to determine persistence and retention in chemistry and related majors
- Designed software to process interview transcripts for coding purposes and to calculate intercoder reliability

## PROJECTS

**Super Smash Brothers Ranking Algorithm**

- Utilized GraphQL-like API to pull Super Smash Brothers tournament data from a large tournament database
- Manipulated, processed, and stored data into appropriate data structures for optimal retrieval and manipulation
- Utilized and developed modified ELO algorithm in order to best assign a ranking score to included players

## LEADERSHIP

**UC Berkeley Statistics Department**

*January 2023 - Present*

Undergraduate Statistics Teaching Assistant

*Berkeley, CA*

- Collaborated with professors in regards to improving an 800 person undergraduate statistics course
- Held office hours for students to ask questions about the course
- Aided in lecture by being available to answer student questions during class time
- Monitored online forum and created video content as extra resources for the course

**Smash At Berkeley**

*August 2022 - Present*

Executive and Web Designer

*Berkeley, CA*

- Collaborated with other executives to organize fundraising events
- Spearheaded end of semester invitational event with \$1,000+ worth of prizes and hundreds of online viewers
- Advertised club events to students and non-students through social media averaging over 40 weekly attendees
- Planned cross university Bay Area "The Cow House" events with 150+ attendees
- Designed, implemented and updated a website for the organization using HTML, CSS, and Javascript

**Martial Arts America**

*December 2016 - August 2021*

Martial Arts Instructor

*San Ramon, CA*

- Provided clear, yet challenging martial arts instruction to classes of 5 to 30 children
- Mentored junior instructors; worked with other instructors to strategize more engaging material for students