

SAMREENA SIDDIQUI

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EDUCATION

University of California, Berkeley

B.S. Data Science, B.A. Cognitive Science | GPA 3.96

Graduation: May 2026

Relevant coursework: The Structure and Interpretation of Computer Programs, Data Structures, Foundations of Data Science, Linear Algebra and Differential Equations, Principles & Techniques of Data Science

Foothill High School, Pleasanton CA

GPA: 4.0 (unweighted)

Graduation: June 2022

WORK AND PROJECT EXPERIENCE

NeuroTech @ Berkeley || Software Division

SSVEP Project

Berkeley, CA

August 2022 - Present

- Co-led a team of 8 students in analyzing SSVEP signals to determine gaze direction through the utilization of headsets, with a focus on potential Brain-Computer Interface (BCI) applications
 - Acquired and processed EEG data utilizing Petal Metrics, adept at converting data into CSV or MAT files for analysis and storage
 - Leveraged MATLAB and SciPy to conduct signal processing, adeptly removing noise and editing signals for optimal usability
 - Authored a technical paper summarizing project findings and delivered a presentation to an audience of 80 Berkeley students, showcasing the work
- Dementia Detection*
- Actively developing machine learning algorithms aimed at predicting the presence of dementia utilizing voice biomarkers
 - Engaging in the process of cleaning voice recording data to effectively compress and diminish noise, facilitating subsequent analysis and further experimentation
 - Conducting comprehensive literature reviews, identifying key variables utilized in published papers to inform the foundation of project

The Gomez Lab || Computational and Molecular Biology

Undergraduate Researcher

Berkeley, CA

May 2023 - April 2024

- Utilized R for RNA sequencing, converting biological files (FASTA, FASTQ) into amino acid sequencing data
- Shadowed and was mentored by in lab computational biologist
- Implemented an organizational system in the lab to streamline the arrangement of equipment, materials, and solutions, resulting in increased productivity and efficiency
- Designed experiments to assess the strength of neuronal connections, conducting extensive genotyping and PCR reactions to analyze results

LEADERSHIP AND CLUB WORK

Big Data @ Berkeley

Data Science Content Creator

Berkeley, CA

January 2024 - Present

- Developed a comprehensive data science course, slated for release on EdX by May 2024, covering fundamental principles such as logistic regression, clustering, exploratory data analysis (EDA), and other essential topics in data science
- Utilized DeepNote to code homework and assignments, incorporating HTML and Python along with associated packages such as Pandas, NumPy, SciKit, and more
- Produced and published lecture videos for global dissemination, enabling access to educational content for students worldwide

Brain Exercise Initiative

President

Berkeley, CA

August 2022 - Present

- Expanded club membership from 25 to 60 active participants within a single semester, fostering a more vibrant and engaged community
- Initiated and broadened connections with Senior Center homes, increasing partnerships from 2 to 5 establishments
- Conducted weekly team meetings, facilitating discussion, creating weekly summaries, and coordinating tasks for other executive members
- Volunteering with seniors with dementia to enhance cognitive abilities through reading, writing, and conversation

NeuroTech @ Berkeley || Education Division

Lecturer and Textbook

Berkeley, CA

January 2024 - Present

- Instructing Berkeley course to a cohort of over 70 UC Berkeley students interested in neurotechnology
- Collaborated with other course lecturers, to develop and deliver presentations
- Increased awareness and attendance by 40% through practical marketing techniques
- Authored 5 chapters of an online textbook covering introductory neurotech concepts, accessible to students and the public via GitHub.

SKILLS AND INTERESTS

Skills: Python, R, Java, SQL; NumPy, Pandas, Matplotlib, Seaborn, SciKit, Data Visualization, Excel, PowerPoint

Interests: Avid guitar and tennis player, baking amateur