

Fiona McBride

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EDUCATION

University of California, Santa Barbara

June 2022

College of Creative Studies - Honors Program

High Honors

Biology, B.A. Minor: Professional Writing - Science Communication

EXPERIENCE

Data Evaluation Intern

February 2022 - June 2022

Center for Science and Engineering Partnerships, University of California, Santa Barbara

- Use Excel to process and visualize data
- Write reports to evaluate progress toward goal metrics set by programs at UCSB and partnering institutions

Undergraduate Neuroscience Researcher

September 2018 - June 2022

Goard Lab, Neuroscience Research Institute, University of California, Santa Barbara

- Use widefield microscopy to investigate predictive coding responses to texture and motion in the primary visual cortex
- Use 2-photon microscopy to determine the roles of anterior and posterior visual area V1 in responding to natural and noise textured images in mice
- Trained mice in left/right decision-making mazes to discover more about short-term memory

Bioinformatics Research Intern

June 2017 - September 2021

Blau Lab, Baxter Laboratory for Stem Cell Research, Stanford School of Medicine, Stanford University

- Integrating Python toolkits (including Seaborn, Pandas, Scanpy, and Numpy) to construct a novel approach for spatial visualization of cellular signaling in tissue
- Creating a database of cell-cell interactions to understand the environment of complex tissue
- Trained a neural network designed to identify cell and fiber types in healthy, injured, and regenerating tissue
- Assisted with data collection and analysis for projects to improve muscle stem cell function and regeneration in aging populations

Learning Assistant for Upper Division Eukaryotic Genetics Class

Summer 2020, Winter 2021

University of California, Santa Barbara

- Created supplemental material for small group discussions, including midterm and final review sessions
- Advised students on upper-division courses and major declaration

Biology Mentor for Introductory Biology Class

Fall 2020

University of California, Santa Barbara

- Led weekly sections with 20+ students to review concepts from lectures and held midterm review sessions before each of the two midterms
- Increased student test scores by 12%, as compared to students not in the mentoring program

AWARDS AND ACTIVITIES

Phi Delta Epsilon Pre-Medical Fraternity

September 2019 - June 2022

- President (2021): established Diversity, Equity, and Inclusion Committee; invited and mediated discussions with guest speakers in medical and professional fields; lead weekly meetings for 60-80 members; oversee all recruitment, programming, and fundraising events for the fraternity
- Programming Chair (2020): organized volunteer events with Habitat for Humanity, and educational workshops

Undergraduate Research and Creative Activities Grant

December 2019, 2020, 2021

- Received \$750 to pursue research and ultimately present on visual processing in the primary visual cortex of mice
 - Poster: *Investigating Distance Coding in the Primary Visual Cortex of Mice* (May 2022)
 - Poster: *Investigating Predictive Coding in the Primary Visual Cortex of Mice* (May 2021)