SHREYA SINGH

Last Updated: Oct. 2025

Personal Website | **Github**

EDUCATION

University of California, Los Angeles (UCLA) — *Senior* | *Sept. 2023 - Jun. 2026 (expected)*

Major: Cognitive Science **Minor:** Data Science Engineering

GPA: 3.80/4.00

RESEARCH EXPERIENCE

Naval Health Research Center (NHRC) — *NREIP Intern* | *Jul. 2025 - Present*

Supervisor: Dr. Weimin Zheng

- Conducted literature review of existing EEG reconstruction models to guide experiment design.
- Helped develop a novel experimental paradigm for visual reconstruction data collection, including stimulus selection and display optimization.
- Adapted existing machine learning models for image reconstruction to NHRC's computing environment, including GPU adaptation, Python environment configuration, and data preparation.
- Presented key research findings and proposed future steps to senior research leadership.

Computational Social Neuroscience Lab (CSNL) — *Research Assistant* | *Sept. 2024 - Present*

Supervisor: Dr. Carolyn Parkinson

- Contributed to weekly lab meetings and journal discussions to deepen understanding of social neuroscience methodologies and experiment design.
- Generated visual stimuli for dorm social network study by photographing participants for use in fMRI scans.
- Conducted brief literature review and provided input on study design for construal level processing study.

Computational Vision and Learning Lab (Hongjing Lu Lab) — *Research Assistant* | *Apr. 2025 - June 2025*

Supervisor: Dr. Hongjing Lu

- Prepared and standardized experimental stimuli by annotating key features across 64 images, ensuring consistency and reliability across trials.
- Conducted cognitive psychology experiments on event role recognition, including participant consent, administration, and data collection from 45 participants.
- Identified a flaw in the experimental wording that was confusing participants, leading to a protocol revision to ensure data quality.
- Wrote a capstone research paper detailing my work in the lab, covering role recognition, experimental design, data collection, and analysis.
    - ***Role Recognition In Brief Displays: A Method for Naturalistic Images***

De Sa Lab, UC San Diego — *Summer Research Intern* | *Jun. 2024 - Sept. 2024*

Supervisor: Dr. Virginia De Sa

- Reviewed and annotated research articles on advanced EEG research methodologies, including neural networks, dimensionality reduction techniques, and visual reconstruction methods.
- Gained exposure to computational models (e.g. PCA, autoencoders, diffusion models) and their applications to brain signal decoding by participating in weekly lab meetings.

ACADEMIC PROJECTS

Few-Shot Learning Research Paper | *Jun. 2025*

Course: Perception, Learning, and Learning Technologies (PSYCH 124J), UCLA, Spring 2025

- Wrote a research paper that synthesizes literature on few-shot learning and proposes a new study to investigate whether inductive biases are learned or innate.
    - ***Few-Shot Learning: A Literature Review and Research Proposal***

Penguin Classification Project | *Jun. 2024*

Course: Python with Applications (PIC 16A), UCLA, Spring 2024

- Collaborated with a partner to program two different classification models to identify penguin species based on given data.
    - **Penguin Classification**

TECHNICAL SKILLS

Tools: Python, C++, Git

Research Methods: EEG Data Collection, Behavioral Data Collection, Experimental Design, and Literature Review.

AWARDS AND HONORS

National Merit Scholarship | *Mar. 2023*

- $2500 awarded based on PSAT/NMSQT exam scores for academic merit, used for undergraduate tuition.

RELEVANT COURSEWORK

Psychology: Introduction to Cognitive Science; Psychological Statistics; Research Methods in Psychology, Sensation and Perception; Perception, Learning, and Learning Technologies

Computer Science: Introduction to Computer Science I and II (C++); Python with Applications; Algorithms and Complexity

Math: Discrete Math; Multivariable Calculus; Differential Equations