Yiting Wang

949-302-2656 yitingwang10@g.ucla.edu

Education

University of California, Los Angeles **Sept 2023 - (Expected)July 2025**

Double Major in Cognitive Science and Statistics *GPA:3.96*

University of California, Irvine **Sept, 2021 - June, 2023**

Research Interest

Understanding neuron circuit mechanisms in the processing and encoding of sensory inputs and memory.

Lab Experiences

UCLA Blair Lab — June 2024 – Present

Research Assistant with individual project

- **Advisor: Dr. Hugh Tad Blair**
- Examining explanations for the differences in the Inferotemoral (IT) neural encoding of familiar vs. unfamiliar visual stimulus in macaque hippocampus, using AlexNet model to mimic the hierarchical organization of primate vision pathways.

UCLA Han Du's Quant Lab — Oct 2023 – Present

Research Assistant

- **Advisor: Dr. Han Du**
- Evaluated the application of Random Forest method in psychology and health research, reviewed and summarized real-data papers.
- **Manuscript in preparation: Review of Existing Use of Random Forest in Social Science.**

UCLA Computational Vision and Learning Lab — Jan 2024 – June, 2024

Research Assistant

- **Advisor: Dr. Hongjing Lu**
- Applied Bayesian hierarchical models to study people's decision-making strategies in social sampling when approaching questions of different contexts.
- Depending on different question contexts, people would draw knowledge from different social circles and weight the circles differently.
- Compared use of Markov Chain Monte Carlo (MCMC) method in data simulation process of two versions of code, received similar results.

UCI Modeling and Decision Making Lab — Sept 2022 – June 2023

Research Assistant

- **Advisor: Dr. Mark Steyvers**
- Studied the decision process of individuals adopting suggestions from different perspectives in a quantitative estimation scenario.
- When given the perspectives of others, individuals are able to evaluate the quality of available information from others and the quality of others' estimations.

Other Projects

Effects of Calcium Supplementation on Bone Mineral Density Development in Children **2023.03-2023.06**

- Examined The Effects of taking calcium supplements on bone mineral density in children within one year. Optimized and compared the model fitting outcomes of General Least Square (GLS) model and Linear Mixed Effects (LME) model. Completed research and analysis report in line with industry standards.

Effects of Split-brain Surgery on Patients' Object Recognition Ability in Visual Fields **2022.03-2022.06**

- Led a group of 6, visualized and compared object recognition and speech abilities among normal population and split-brain patients. Compared the fitting performance of five linear model designs.

Supervised Machine Learning and EEG signal Processing **2022.09-2022.12**

- Pre-processing brain Event-Related Potential (ERP) data for locating functional brain regions and brain response patterns to different simulations, using linear discriminant analysis(LDA). Carried out data cleaning, filtering, modeling, and visualization. Visualized the correlation relationship between brain parts when given stimuli.

The Application of Artificial Intelligence in Biomedical Problems **2019.09-2020.09**

- Explored the correlation between the gene-phenotype of Chinese hands (2D:4D, the length ratio of index finger to ring finger) and the genes of diseases such as gastrointestinal tract, cancer, and mental illness.
- Led a team of 5, applied convolutional neural network (CNN) to realize the prediction and automatic labeling of image feature points by using the algorithm, and conducted a study using the extracted biological information. Compared the costs and learning results of multiple CNN models (Resnet-50, Resnet-152, Densenet).
- Awarded honor member for the academic year in the defense held by Chinese Academy of Sciences(5 out of 40).

Work and Volunteer Experiences

California State Summer School For Mathematics and Science(COSMOS) **July 2024 – Aug 2024**

Undergrad TA *UCLA*

- Assisted 23 high school students learning in the cluster "Brain-Inspired Computing: Learning in Biological and Artificial Neural Networks."
- Designed and delivered course slides and coding activities with a instructor team covering supervised, unsupervised and reinforcement learning and related neuroscience experiments.
- Debugged students' codes for class activities and group final projects, mentored for presentations in the final poster session.

UCLA Undergrad Journal of Psychology **Sept 2023 – Present**

Leading Editor

- Reviewed and commented on 20 submissions, provided final revision for 1 paper during 23-24 school year. Training new editors in the club for 24-25 school year.

Data Solution Startup, Airtom **July 2023 – Sept 2023**

Intern *Shanghai, China*

- Served as data consultant for data solution start-up with 11 employees. Proposed models to meet different needs for clients from healthcare and retail business fields. Explained model estimation process to algorithm engineers.
- Implemented exploratory data analysis for a Chinese high-end women's wear retailer company. Explored the current business operation strategies and regional preferences. Proposed implementations of statistical analysis and model predictions that help cut costs and support business growth. Produced a 10-page business analysis report.

UCI student newspaper, "New University" **Oct 2022 – June 2023**

Graphics

- Created 60 graphics for news articles, comics and social media posts to help the newspaper to convey messages, aid understanding and attract readers.

UCI Writing Center **Sept 2022 – June 2023**

Student Administrative Assistant

- Helped UCI students access resources and services, replied to daily phone calls and e-mails, checked-in for booked appointments, designed graphics to advertise service and events.

Anteater Cultural Awareness Program, Student Union (ASUCI) **Sept 2021 - June 2022**

Co-designer, TA *UC Irvine*

- Created a 1.3 units student-led course. Designed posters and slides to promote program and other events. Recruited 45 students to take the class for a quarter. Designed class contents about European culture with UCI Faculty from Lithuania, held discussion sections for weekly lectures, planned and hosted hands-on cultural activities.

Skills

Language: English, Chinese Mandarin, Shanghainese

Lab: Rat handling; EEG/fMRI data processing; Running online human behavioral experiments

Programming: Python, R, MATLAB, C++, JavaScript, LaTeX

Office: MS Office (Excel, Word, PowerPoint); Google (doc, spreadsheet, slides)

Design: Canva, Procreate