Shirley Wang

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SKILLS
- Proficient in: R, Python, SAS, MATLAB, SPSS, Pandas, SQL, PsychoPy, Qualtrics, Power BI
- Skilled in data organization, management, and analysis in research lab environments
- Experienced in developing experiments and projects using PsychoPy
- Adept at utilizing various software tools for scientific research and data processing
- Language: Mandarin, Spanish

EDUCATION
University of California, Santa Barbara (UCSB)   Expected Graduation: June 2025
Bachelor of Science (B.S.), Statistics & Data Science and Psychological & Brain Sciences
GPA: 3.75
Relevant Coursework: Machine Learning, Data Science Principles, Linear Algebra, Probability & Statistics, Design of Experiments, Survival Analysis, Bayesian Data Analysis, Applied Stochastic Processes, Cognitive Psychology, Biology

DATA SCIENCE EXPERIENCE
Stanford SLAC National Accelerator Laboratory   **Santa Barbara, CA**
Researcher (Capstone project)   January 2025 - Present
- Develop a deep learning model to classify crystal images using Transformer and ResNet architectures.
- Implement data preprocessing, visualization, and augmentation techniques to enhance model performance.
- Fine-tune hyperparameters, including learning rate scheduling and batch size adjustments, to improve accuracy.

UCSB Meta Psychology Lab   **Santa Barbara, CA**
Research Assistant   June 2024 - Present
- Collaborate with a Postdoctoral Researcher to organize, visualize, and analyze over 5,000,000 data across various conditions (e.g., time periods, categories) to investigate attention characteristics.
- Update and modify legacy code for a personality experiment, ensuring compatibility by managing necessary package installations, enabling the study of vision-perception relationships.
- Apply data analysis techniques to extract insights into human attention patterns, contributing directly to research objectives.
- Develop PsychoPy programs to facilitate participant interaction in experiments, investigating curiosity and its influence on learning motivation.

UCSB Louis Sensory Systems and Behavior Lab   **Santa Barbara, CA**
Research Assistant   December 2024 - Present
- Developed a data analysis pipeline for larva movement tracking using PiVR, ensuring accurate extraction of head, midpoint, and tail movement information for machine learning tasks.
- Fine-tuned machine learning models for classifying larva movement, increasing prediction accuracy from 68% to 74% through hyperparameter optimization and data preprocessing.
- Continuously improving the model's performance while collaborating with lab members to advance research on larval movement patterns.

UCSB Spark Phonetics Lab   **Santa Barbara, CA**
Research Assistant   September 2023 - December 2024
- Process raw experiment data in Python, organize and clean data, and record the results into Excel
- Arrange analysis results from Python into worksheets for further linguistic analysis
- Modify existing code when a new language needs to be analyzed or issues arise.

PROFESSIONAL EXPERIENCE
UCSB Housing   **Santa Barbara, CA**
Resident Assistant   September 2023 - Present
- Submitted reports on infractions, violations, and safety issues to ensure a safe and compliant environment.
- Organized and promoted 12 community events with over 100 attendees per event, preparing food and materials to foster resident engagement.
- Mentored 240+ residents, addressing roommate conflicts, living challenges, and academic concerns.
- Responded to complaints, requests, and emergencies, including two fire emergencies; drafted 14 incident reports and resolved three major conflicts effectively.
- As a returning RA, assisted in leading a team of 17 Resident Assistants by providing guidance on daily tasks, event planning, and community-building initiatives.

UCSB Instructional Development   **Santa Barbara, CA**
Student Staff   December 2022- August 2023
- Provided technical support for classroom equipment, ensuring seamless operation during academic sessions.
- Delivered customer service by managing equipment lending, registering login information for employees, and coordinating classroom usage.
- Managed administrative tasks, including completing paperwork and responding to inquiries from students and professors regarding classroom and computer system access.
- Set up audiovisual equipment, such as speakers and projectors, to ensure successful events and presentations.
- Conducted inspections to maintain optimal equipment conditions and ensured proper positioning for functionality.

UCSB Recreation Center   **Santa Barbara, CA**
Special Event Staff   September 2022 – June 2023
- Set up and dismantled equipment for sports events, ensuring efficient and timely preparation.
- Responded to player and audience injuries, providing assistance and documenting incidents accurately.
- Enforced facility policies to maintain a safe and organized environment during events.
- Addressed audience inquiries, offering clear and accurate information about event schedules and activities.