Serial Dependence: How Does Human Visual System Stabilize Our Perception?

Faculty Sponsor: David Whitney
Supervisor: Yuki Murai
Main Contact Email: ymurai@berkeley.edu
Location: Berkeley Way West
Position Available: Fall 2018, Spring 2019
Website: https://whitneylab.berkeley.edu

Description of Research

I’m Yuki Murai, a postdoc in the Whitney lab. I’m looking for research assistants for a few projects. RAs can acquire various research skills and potentially give presentations on their scientific work. Below is the list of projects:
- Serial dependence: a psychophysical study about the stability of human’s visual perception
- A neuroimaging study of serial dependence: studying the physiological basis of serial dependence using EEG and MEG

Description of Student Responsibilities

RA Tasks Include:
- recruiting and scheduling experiment participants
- data collection for psychological and neuroimaging experiment
- (potentially) data analysis using softwares such as matlab, python, EEGLAB, and BrainVoyager

The abilities necessary for RA include:
- managing time and multiple tasks
- maintaining effective communications with lab members and participants
- experience with one or more programming languages (preferably Matlab or Python)

Application Process

If you are interested, please email Yuki Murai (ymurai@berkeley.edu) your resume.

Application Deadline

08/24/18
Linking Delay of Gratification to Cognitive and Affective Processes and Family Dynamics in Early Childhood

Faculty Sponsor: Ozlem Ayduk
Supervisor: Ozge Ugurlu
Main Contact Email: ozge.ugurlu@berkeley.edu
Location: On Campus
Position Available: Fall 2018, Spring 2019
Website: https://rascl.berkeley.edu/

Description of Research
The overarching goal of the current research is to better understand why delay of gratification is a powerful predictor of developmental outcomes and what aspects of the family environment function to cultivate this skill. We will measure delay of gratification ability in a sample of 5-to-8-year-old children and will evaluate whether performance on this task relates to an array of child competencies and parent-child dynamics. Work procedures New research assistants in the Relationships and Social Cognition Lab (RASCL) will be expected to recruit participants, schedule families and welcome them to the lab, collect new data, code videotape data for behaviors, clean and organize existing data collected in the lab, and analyze them. To run participants in the lab, research assistants will get proper training. The research assistant will arrive to the assigned room and prepare the experiment materials prior the schedule time. Then they will conduct the experiment, debrief, and thank the participant for participating.

Description of Student Responsibilities
Be motivated to work with children, learn more about emotion recognition and self-control. Have good communication and organizational skills. Weekly 6-9 hours of dedication.

Application Process
Email to ozge.ugurlu@berkeley.edu

Application Deadline
Open until filled
Psych 199 Research Assistant Postings – Fall 2018

Representation of Science in the Media

Faculty Sponsor: Tom Griffiths
Supervisor: Rachel Jansen
Main Contact Email: racheljansen@berkeley.edu
Location: On Campus
Position Available: Fall 2018, Spring 2019

Description of Research
The goal of this research project is to understand how scientific findings - beginning with but not limited to psychology and cognitive science - are reported and understood by laypeople, journalists, and researchers. Through online studies and analysis of observational data, we will test what participants can remember about findings they have read about, what kinds of sources are deemed credible, and if there are findings more frequently mentioned than others.

Description of Student Responsibilities
Student researchers will work closely with one graduate student in Cognition, one postdoctoral researcher, and one faculty member. For this project, applicants should be either already proficient or interested in the design of semi-automated online experiments using Qualtrics and Amazon's Mechanical Turk. Responsibilities will also include searching for, reading, and coding academic papers and news articles about various scientific findings. Research assistants are expected to work at least 5 hours per week. Day-to-day supervisor for this project: Rachel Jansen, Ph.D. Candidate.

Qualifications: FIVE REQUIRED SKILLS
1) A strong computational background.
2) Experience programming in Python or R (preferably using Jupyter notebooks).
3) Experience with statistics and/or machine learning.
4) A strong interest in cognitive science or scientific communication.
5) Strong attention to detail.

ADDITIONAL PREFERRED EXPERIENCE (NOT REQUIRED):
1) Experience in another scientific domain.
2) Having taken "Computational Models of Cognition".
3) Experience with Adobe InDesign, LaTeX, and data visualization.

Application Process
Please send a statement of interest and CV to racheljansen@berkeley.edu. In your application, please specify whether you are able to continue working in the spring and/or the following summer or fall and list any relevant coursework you have completed.

Application Deadline: Open until filled
Psych 199 Research Assistant Postings – Fall 2018

Studying Daily Emotional Support in Adult Romantic Couples

Faculty Sponsor: Sheri Johnson
Supervisor: Benjamin Swerdlow
Main Contact Email: calmprogram@gmail.com
Location: Berkeley Way West
Position Available: Fall 2018, Spring 2019
Website: http://calmprogram.wixsite.com/calmania

Description of Research
Dr. Sheri Johnson and her graduate student, Benjamin Swerdlow, are embarking on a new, multi-year study of how romantic partners support one another emotionally in daily life. We will be recruiting adult romantic couples from the community and will be asking couples to report on and audio record their daily interactions with one another. The central aim is to understand how these emotional support interactions are related both to individual wellbeing as well as to maintaining healthy and rewarding romantic relationships. RAs who demonstrate commitment and aptitude and who are interested in pursuing additional research opportunities, up to and including honors theses, with Dr. Sheri Johnson and her team will have opportunities to do so. Our team conducts research studies on a number of topics, including impulsive responses to emotions, stress, reward sensitivity, creativity, and self-injury across a range of clinical and nonclinical populations.

Description of Student Responsibilities
RAs may be engaged in a number of different tasks depending on interest, dedication, and experience level.
These may include:
- Coding audio recordings of participant interactions. All RAs will receive training in the cultural informant approach to behavior coding and will be engaged in audio coding.
- Participant outreach and recruitment.
- Participant engagement and communication.
- Running intake and behavioral sessions.
- Conducting searches and reviews of relevant psychological literature.
- Data analysis using SPSS and R.

Application Process
Interested applicants should send an email to bswerdlow@berkeley.edu, including a CV/resume and a brief cover letter (including research interests and weekly availability). Qualified applicants will be available at least 12 hours/week; maintain a 3.0+ GPA; be punctual, conscientious, and detail-oriented; and demonstrate professionalism and strong interpersonal skills. Applicants are expected to make at least a one-year commitment to Dr. Sheri Johnson's team; ideally, applicants will become part of the team for multiple years in order to receive the best training and mentorship experience. In-person interviews will be scheduled and conducted by Benjamin Swerdlow.

Application Deadline
Open until filled
Personalized Assessment and Treatment Development for Substance Use Disorders

Faculty Sponsor: Aaron Fisher
Supervisor: Peter Soyster
Main Contact Email: petersoyster@berkeley.edu
Location: Berkeley Way West
Position Available: Fall 2018, Spring 2019

Description of Research
The goal of this research is to understand the mechanisms driving substance use at an individual level. The role substance use plays in peoples' lives can vary greatly from person to person. Some people use drugs once a year, others several times per day. Some people use drugs more when they are depressed or anxious, others use drugs more when they are happy and excited. Substance use can lead to negative consequences, and some people have a hard time controlling the amount they use. Much research has investigated "the best way" to help people reduce their drug use. Given that the reasons people use substances can be very different, our lab is investigating drug use at the individual level. Our current work is aimed at identifying person-specific mechanisms driving substance use, with the ultimate goal of developing personalized treatments for substance use disorders.

Description of Student Responsibilities
In order to achieve the goal outlined above, we are recruiting research assistants (RAs) with an interest in substance use disorders. Specifically, RAs on this project will:
1. Schedule participants (RPP and community participants)
2. Run participants through study procedures
3. Monitor participant compliance with data collection
4. Contribute to data coding and management
5. Attend weekly lab meetings

**We are particularly interested in working with RAs who have mobile app development or coding experience.

Application Process
Applicants for this position must be willing to commit a minimum for 10 hours per week to research responsibilities. Preference will be given to applicants who can commit to staying in the lab for at least 1 year. Previous research experience is preferred but NOT required. Interested individuals should email the project lead Peter Soyster (petersoyster@berkeley.edu). In your email, please include a CV and your availability for the Fall 2018 semester.

Application Deadline: Open until filled
Emotion Perception in Dynamic and Naturalistic Videos

Faculty Sponsor: David Whitney
Supervisor: Zhimin Chen
Main Contact Email: mandy_chen@berkeley.edu
Location: Berkeley Way West
Position Available: Fall 2018, Spring 2019
Website: https://whitneylab.berkeley.edu/index.html

Description of Research
Emotion recognition is a core aspect of human experience, important for social functioning. It is widely assumed that registering facial expression is the key to this and models of emotion recognition have mainly focused on facial and bodily features in static, unnatural conditions. However, emotion perception is continuous and dynamic, and an individual’s face and body are usually perceived within a meaningful context. These face-based models and measures are very limited for understanding the mechanisms underlying emotion recognition and the development of real-world applications. Here we aim to understand the mechanisms underlying efficient and robust emotion perception. An alternative, albeit contentious, view is that emotion recognition is, at its heart, a context-mediated process: context makes a significant and direct contribution to the perception of emotion in a precise spatial and temporal manner. Human perceptual systems are exquisitely sensitive to context and gist information in dynamic natural scenes. Such dynamic gist information could carry rich affect-relevant signals, including the presence of other people, visual background scene information, and social interactions—unique emotional information that cannot be obtained from an individual’s face and body. In fact, a recent meta-analysis found that facial expressions do not often reflect our real emotional states at all, but instead our intention or social goals. For example, a smiling face could accompany completely different internal emotions depending on the context: it could be faked to hide nervousness in an interview setting; it could signal friendliness when celebrating other people’s success; it could also show hostility when teasing or mocking others. Therefore, we hypothesized that emotion recognition may be efficiently driven by dynamic visual context, independent of information from facial expressions and body postures. Our project is using hundreds of dynamic and naturalistic video clips (large dataset), in combination with deep learning neural networks, and advanced human behavioral measures. We also expect that our project will extend to use brain imaging techniques such as EEG and fMRI. We believe that our findings will benefit Computer vision, neural, and social-cognitive models, as well as psychological measures of emotional intelligence.

Description of Student Responsibilities
There are many tasks for research assistants to accomplish and we will assign manageable tasks every week depending on assistants’ skill sets and preferences. Research assistants will mainly be responsible for preparing experimental materials, running experiments, and analyzing data. Specific tasks will include processing outputs from deep learning neural models for video analysis in Python, editing videos using software like Adobe Premiere Pro, managing data collection and credits assignment through RPP, writing data analysis code in Python, and editing unpublished manuscript submitting to academic journals etc. Research assistants will receive training for the tasks assigned and we will meet regularly to update progress. RAs will be expected to demonstrate significant progress towards completion. We will
also spend weekly meetings discussing background papers and connecting the dots to the broader literature. RAs will be expected to develop leadership and professional skills requisite for future academic and professional pursuits.

Required skills: High motivation, effective communication and problem-solving skills Desirable but not essential: Experienced in video editing using Adobe Premiere Pro; Experienced in Python or Matlab; Basic knowledge of deep neural networks; Basic knowledge about human perception from class C126.

Application Process
Please email your resume/CV and academic transcript (unofficial is okay) to Mandy Chen (mandy_chen@berkeley.edu). In your email, please 1) mention the skills you have, 2) attach your CV and transcript. The candidate is also expected to have high motivation in doing research and take responsibility for one semester. An interview may be arranged.

Application Deadline: Open until filled
Cross-Culture Differences in Emotion Regulation

Faculty Sponsor: Iris Mauss
Supervisor: Gerald Young
Main Contact Email: geraldyoung@berkeley.edu
Location: On Campus, remote
Position Available: Fall 2018, Spring 2019
Website: https://eerlab.berkeley.edu/

Description of Research
Investigating the different ways in which culture and ethnicity impact emotion regulation (e.g., consequences, choices) and the mechanisms that are responsible for cross-culture and cross-ethnic differences in emotion regulation.

Description of Student Responsibilities
Lit reviews, study design, methods creation, running participants, data analysis (in R). I will train you to be able to carry out each of these responsibilities as they arise.

Application Process
Send an email to geraldyoung@berkeley.edu to inquire about positions.

Application Deadline
Open until filled