Mei Yang

647-234-4791 | mei.yang@mail.utoronto.ca | Toronto, Ontario M4Y 1Z3

EDUCATION

University of Toronto Toronto, ON
Bachelor of Arts – Psychology Research Specialist, Minor in Sociology *Sept 2019 - June 2024 (Expected)*

- **Academics:** GPA: 3.86/4.00
- **Thesis:** Group collaboration in hierarchical structure
- **Awards:** University of Toronto Admission Entrance Scholarship 2019; Dean's List Scholar Winter 2021 & Summer 2021, University of Toronto Excellence Award 2023

RESEARCH INTERESTS

My research interests revolve around understanding the cognitive mechanism and computational principles underlying decision-making and social cognition. I seek to explore these processes by employing and integrating diverse qualitative and quantitative methods such as ethnography, interview, behavioral experiments, psychophysics and computational simulations.

RESEARCH EXPERIENCE

University of Toronto, Social Cognitive Science Lab **Toronto, ON**
Thesis student *April 2023 - Ongoing*
Advisor: Professor William Cunningham
Project: Group collaboration in hierarchical structure
Human beings collaborate in the wider context of a hierarchical social system. This research aims to understand the cognitive mechanisms through which humans self-select into different roles that enable collaboration under group structure by having human participants and computer agents play a modified group prisoner's dilemma.

- Conducted literature review on the formation of social behavior in linear hierarchy and independently developed original research concepts by drawing inspirations from economics, anthropology, and animal behaviors studies.
- Modified a group prisoners' dilemma paradigm and collected data from human participants.

University of Toronto, Bernhardt-Walther Lab **Toronto, ON**
Mini-Thesis Student *Jan 2023 - Ongoing*
Advisor: Professor Dirk Bernhardt-Walther
Project: Bridge Aesthetics
As a type of confined architectural space embedded in wider scenes, bridge aesthetic can provide important insight to the perceptual and cognitive underpinning of the aesthetic experience in general. The present research is the first empirical work examining the contribution of engineering features to the aesthetic evaluation of bridges and investigate the perceptual underpinnings of the aesthetic experience.

- Prepared experimental stimuli, designed and coded interactive online rating experiments using jsPsych, and collected data from participants.
- Conducted multi-variate data analysis using factor analysis with mixed data (FAMD) and multiple linear regression in R to explore the relationship between engineering design features and aesthetic variables.
- Analyzed the bridge images' structural properties of contours using the Mid-level Vision Toolbox (MLVToolbox) in Matlab.
- Conducted literature review on the neuroaesthetic basis of architecture perception, and help drafted a research paper summarizing the results.

Project: Prototypicality Mediation of Perceptual Fluency and Aesthetics Pleasure
The subjective experience of perceptual fluency can impact aesthetic evaluation. The present research examined the perceptual fluency hypothesis of aesthetic by applying it to scene perception using a scene categorization task.

- Coordinated schedules with fellow research assistants and participants, developed experimental protocols to ensure the smooth and timely execution of research projects. Ensured efficient and meticulous documentation to contribute to data integrity. Modified the experiment codes in Inquisit to ensure consistent file naming convention and format.
- Assisted with data analysis of a scene categorization task by correlating the aesthetic and perceptual fluency rating score with the accuracy and speed in the categorization task using R studio. Presented the preliminary results on lab meeting.

University of Toronto, Social Perception and Cognition Laboratory　　　　　　　　　**Toronto, ON**
Research Assistant　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*Sep 2022 – Ongoing*
Advisor: Professor Nicholas Rule
Project: Political affiliation perception: a hierarchical drift diffusion account
Previous research in political impression formation has found that people can tell other people's political affiliation from faces with accuracy. This current research seeks to examine the cognitive processes underlying the evidence accumulation process that drive such accurate political affiliation judgements by modeling the decision process using a hierarchical drift diffusion model (HDDM).

- Integrating evidences across computational political cognition and impression formation literature and independently developed the research idea.
- Designed an online categorization experiment using jsPsych and collected data from participants. Examined the resulting data using a hierarchical drift diffusion model in Python.
- Conducted analysis using signal detection theory. Replicated a previous results finding in-group over exclusion effects.

Project: Political orientation and attractiveness
Previous research has found that attractiveness judgement is associated with group membership. The present work examines whether this holds for political orientations.

- Web-scraped portraits of people belonging to different political parties and batch standardized these images using Photoshop.
- Drafted and posted survey using Qualtrics, collected data from participants, analyzed and modeled the resulting data using a general linear model (GLM), and found that own political affiliation interacted with the attractive judgement of faces with different political affiliation.
- Initiated and finalized the design of lab Photoshop standardization pipeline and distributed to fellow research assistants. Altered the resolution of stimuli to investigate image quality's effect on person perception.

University of Toronto, OISE　　　　　　　　　　　　　　　　　　　　　　　　**Toronto, ON**
Research Assistant　　　　　　　　　　　　　　　　　　　　　　　　　　　*March 2022 – Dec 2022*
Advisor: Dr. Roy Gillis
Project: COVID-19 Related Stigma and Misinformation

- Conducted systematic literature review on COVID-19 related stigmatization and vaccine hesitancy, independently sourced and adapted 3 quantitative scales pertaining to East-Asian and LGBTQ community.
- Assisted with the conduction of semi-structured interview by reviewing and editing interview questions particular to East-Asian participants.

Activities & Leadership

Inkblot – The Undergraduate Journal of Psychology　　　　　　　　　　　　**Toronto, ON**
Co Editor-in-Chief & Marketing Director　　　　　　　　　　　　　　　　　*Sep 2022 – Ongoing*

- Developed promotional content that effectively communicated the journal's mission and encouraged submissions. Promoted the content through course instructors and on social media platforms.
- Scheduled and coordinated group meetings with other club members to ensure effective planning and execution within the publication cycle.

SKILLS

- Programming: Python, R, HTML, CSS, JavaScript (jsPsych)
- Lab: psychophysics, fMRI, EEG
- Software: Photoshop, Adobe Audition