Yiwei Cao

(438) 223-6074 • yiwei.cao@mail.mcgill.ca

EDUCATION

McGill University, Montreal, Canada Sep 2019 - 2023E

Bachelor of Arts and Science

Honors Cognitive Science (Neuroscience Stream), Minor Computer Science, CGPA (3.97/4.00)

Awards:

- Science Undergraduate Research Awards (SURA) $7,000 (2021)
- Faculty of Science Scholarship $300 (2021)

RESEARCH EXPERIENCE

Laboratory of Natural and Simulated Cognition (LNSC), Montreal, Canada Sep 2021 – present

Honors Research Project | Supervisors: Prof. Thomas Shultz and Dr. Ardavan Salehi Nobandegani

- Using computer-based simulations to test whether and how the Sample-based Expected Utility (SbEU) model explains empirical demonstrations of violations of the expected utility theory.

The Otto Lab, Montreal, Canada Sep 2021 – Apr 2022

Research Assistant | Supervisors: Prof. Ross Otto and Dr. Mario Bogdanov

- Guided participants in completing cognitive tasks and performed transcranial direct current stimulation (tDCS) in an experiment concerning cognitive effort expenditure and decision making.

The Britt Lab, remote May 2021 – Aug 2021

SURA Undergraduate Researcher | Supervisor: Prof. Jonathan Britt

- Examined, through a review of the literature, whether optogenetically increasing dopamine signaling in the midbrain could cause food addiction or induce a flavor preference in mice.

WORK EXPERIENCE

Chinese Academy of Sciences, Institute of Computing Technology, Beijing, China Jun 2021 – Aug 2021

Intern | Supervisor: Dr. Qi Wang

- Found, read, and wrote short summaries of research papers concerning adversarial attack algorithms that target deep reinforcement learning models.

PUBLICATION

- Cao, Y., Nobandegani, A. S., & Shultz, T. R. (2022). A Resource-Rational Process Model of Violation of Cumulative Independence. In *Proc. of the 44rd Annual Conference of Cognitive Science Society (CogSci)*.

PRESENTATION

- Cao, Y. (2022, April 2). *A Resource-Rational Process Model of Violation of Cumulative Independence* [Conference session]. National Integrative Research Conference (NiRC), Montreal, QC. Canada.

SKILLS AND INTERESTS

Programing: Python, Java, C, Unix, MATLAB, PyTorch

Experimental Neuroscience: transcranial direct current stimulation (tDCS), EEG data analysis with EEGLAB

Languages: English(fluent), Mandarin(native)