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GitHub: https://github.com/LucianPeng

EDUCATION

Master of Arts, Psychology   2023 – Expected 2024
University of Chicago
Advisor: Dr. Wilma Bainbridge & Monica Rosenberg

Bachelor of Science, Honors in Psychology   2019-2023
First Class Honors with Dean's Silver Medal in Science
University of Alberta
Advisor: Dr. Peter Dixon

HONORS & AWARDS

Maroon Research Scholarship	2023
M.A. Director Scholarship	2023
Clare Patershuk Travel Award	2022
Dean's Honor Roll in Science	2021-2023
China Foreign Affairs University Partnership Award	2019
University of Alberta China Transfer Award	2019

PUBLICATIONS

Peng, S., & Dixon, P. (Under Review). Text-based and memory-based metrices of cognitive coupling. *Canadian Journal of Experimental Psychology*.

Feminella, J., **Peng, S.**, & St Jacques, P. (Ready for review). Immersive 3D episodic memory in virtual reality.

Chen, Y., Shalamberidze, T., **Peng, S.**, Nash, K., & Caplan, J. (In Prep). Frontal Midline Theta Oscillations in Trait Anxiety and Episodic Memory.

CONFERENCE PRESENTATIONS

Peng, S., & Dixon, P. (2022, July). Mind wandering and temporal focus on task switching [Poster Presentation]. *Canadian Society for Brain, Behavior and Cognitive Science Conference (CSBBCS)*, Halifax, NS, Canada.

Peng, S., & Dixon, P. (2022, April). Involvement of mind wandering in the inconsistent contradiction effect during narrative reading [Poster Presentation]. *Royce Harder Conference*, Edmonton, AB, Canada.

RESEARCH EXPERIENCES

Master Student – Predictability of Attention and Memorability Network in Retrieval   Sept 2023 – Present
[P.I. Dr. Wilma Bainbridge & Monica Rosenberg] Department of Psychology, University of Chicago

- Performed preprocessing for two fMRI datasets through SPM12 and custom scripts
- Created multiple MATLAB scripts for analyzing in-scanner data alongside out-of-scanner memory test data in multiple approaches
- Conducted static functional connectivity, edge time series analysis, and representational similarity analysis for the attention and memorability data

Research Assistant – 360° Emotion Video Memory in Virtual Reality Setting   Sept 2021 – June 2023
[P.I. Dr. Peggy St Jacques] Department of Psychology, University of Alberta

- Created immersive VR scenes embedded with 360-degree videos and questionnaire in Unity, manipulated the Unity scripts for video order counterbalancing, wrote the lab training manual for VR testing procedures
- Assisted the design of research questionnaires and realized it on Qualtrics and randomized the question order for each participant through Excel built-in function

- Cleansed, analyzed and compiled the research data through Python & Jamovi, and presented research results for audiences including lab members and local cognitive neuroscience seminar
- Formulated methods and results section including testing procedure, results, and figures for publication
- Filmed 360-degree video research stimuli with strict control of six parameters and rendered them through Vuze VR Studio, manipulated and added audio track into the videos through Adobe Premiere Pro

Honors Student – Cognitive Coupling during Reading   Sept 2021 – May 2023
[P.I. Dr. Peter Dixon] Department of Psychology, University of Alberta
- Found the research topic through reading several papers and wrote a few literatures review including mind wandering, working memory, cognitive coupling
- Designed the whole experiment, created 24 counterbalanced narrations with manipulation of lexical and syntactical properties, and operationalized the experiment on TESTABLE
- Formulated a research proposal, wrote and submitted the ethics application to the University Research Ethics Board
- Created the preliminary results figure and the hypotheses map, presented a research poster in a local psychology conference
- Cleansed and analyzed the data through R, and worked on the manuscript for publication purpose
- Finished the whole thesis and modified it to be publishable research paper

Volunteer – Anxiety, Memory, and Brain Oscillation   May 2022 – June 2023
[P.I. Dr. Jeremy Caplan] Department of Psychology, University of Alberta
- Pre-processed the raw EEG data including filtering, manual rejection of both channels and ICA analysis, plotted the ERP plot through EEGLAB extension in MATLAB
- Created and modified MATLAB script for manual baseline correction, data epoch and analysis
- Conducted data analysis on the ERP data and generated a summary of the results

Volunteer – Dyadic Decision-Making   Jan 2021 – Apr 2021
[P.I. Dr. Dana Hayward] Department of Psychology, University of Alberta
- Involved in conducting experiment on Labadvanced website to run participants as one of the experimenters to collect the eye-tracking results
- Pilot tested the eye-tracking technique as a confederate and fixed a few issues of the experimental procedure with the lead of the project

TUTORING EXPERIENCES

Psychology Tutor – Introduction to Research Methods in Psychology   Sept 2021 – Dec 2021
Department of Psychology, University of Alberta, Edmonton, AB
- Clarified course concepts including bivariate & multivariate correlational research, validities of causal claims, validity threats, factorial designs, etc.
- Introduced to students about how to write the research paper, including the general format, citation style, transitions of the sentences, hypothesis formulation and how to interpret the results

Chemistry Tutor – Introductory University Chemistry I, II   Feb 2021 – Apr 2021
Edmonton, AB
- Instructed how to finish lab report including the calculation and clarified the course concepts
- Helped with exam preparation through guiding them to go over the weekly practices

COMMUNITY SERVICE

Media Support and In-person Assistance   Sept 2021 – Dec 2021
Jewish Senior Citizen Center, Edmonton, AB
- Took the lead of creating media posts on Facebook to advertise the Senior Citizen Center with the aim of not only attracting more seniors to come but clearing the stereotype of senior center
- Assisted with daily work including delivering food, assisted elder people during entertainment time and noted

down their cognitive performance while interacting with them

TECHNICAL SKILLS

Languages: Python (including PsychoPy) [Intermediate/Advanced]

R [Intermediate]

MATLAB (including SPM12 & EEGLAB) [Advanced]

Software: Vuze VR Studio, Unity, SPSS, Jamovi, Qualtrics, TESTABLE, GitHub, Adobe Premiere Pro

CERTIFICATES

Computational Neuroscience 2023
Neuromatch Academy

Programming for Everybody 2021
University of Michigan (Coursera)

Python Data Structures 2021
University of Michigan (Coursera)

Data Scientist's Toolbox 2021
John Hopkin's University (Coursera)

R Programming 2021
John Hopkin's University (Coursera)

REFERENCES

Dr. Wilma Bainbridge
Assistant Professor, University of Chicago
Graduate co-supervisor
wilma@uchicago.edu

Dr. Monica Rosenberg
Assistant Professor, University of Chicago
Graduate co-supervisor
mdrosenberg@uchicago.edu

Dr. Peter Dixon
Professor Emeritus, University of Alberta
Undergraduate supervisor
pdixon@ualberta.ca

Dr. Peggy St Jacques
Assistant Professor, University of Alberta
Undergraduate supervisor
pstjacqu@ualberta.ca