CHIH-YI (ETHAN) CHEN

+886-977025850 | ethan.chihyi.chen@gmail.com

EDUCATION

National Taiwan University Taipei, Taiwan
M.S. in Brain and Mind Sciences Sep 2021 – Jan 2024
- Master Thesis: Age differences in decision-making strategies to process featural vs. structural perturbations in environmental choice-outcome mappings
- Advisor: Associate Professor Joshua Oon Soo Goh
- GPA: 4.17/4.3
- 2024 Taiwan Psychological Society Professor Su Xiangyu Psychology Dissertation Award (Awarded to outstanding master's theses in psychology completed in Taiwan)

National Chengchi University Taipei, Taiwan
B.A. in Economics, Minor in Computer Science Sep 2016 – Jun 2020
B.S. in Psychology
- GPA: 4.2/4.3
- Ranking: 2nd/43
- Academic Achievement Award * 2 (top 5% in class each semester)
- Academic Excellence Award (honor of academic excellence for graduates in the School of Social Science)

EMPLOYMENT

National Taiwan University, Taipei, Taiwan
Graduate Institute of Brain and Mind Sciences Feb 2024 – Present
Research Assistant (full-time)
- Principal Investigator: Associate Professor Joshua Oon Soo Goh, Graduate Institute of Brain and Mind Sciences, National Taiwan University
- Perform advanced fMRI connectivity and ROI analysis
- Administer neuropsychological tests for older adults
- Restructure and maintain Python code for ToMNet 2.0 (Theory of Mind neural network project)
- Manage lab Linux servers for brain imaging analysis
- Design and maintain lab website using HTML and CSS, and set up Linux servers for hosting
- Oversee lab expenses and asset management

Academia Sinica, Taipei, Taiwan
Institute of Sociology Sep 2023 – Aug 2024
Research Assistant (part-time)
- Principal Investigator: Assistant Research Fellow Hsuan-Wei Lee, Institute of Sociology, Academia Sinica
- Developed a social network model based on evolutionary game theory
- Implemented a social network simulation using reinforcement learning in C
- Organized and visualized simulation results using Python

National Taiwan University, Taipei, Taiwan
Graduate Institute of Brain and Mind Sciences Sep 2021 – Jan 2024
Research Assistant (part-time)
- Principal Investigator: Associate Professor Joshua Oon Soo Goh, Graduate Institute of Brain and Mind Sciences, National Taiwan University
- Developed and conducted fMRI experiments using PsychoPy, collecting data from younger and older adult participants
- Administered neuropsychological tests and summarized results
- Designed and implemented reinforcement learning models using Python and MATLAB
- Performed fMRI analysis with SPM12, automating the process using Linux Bash scripts

National Taiwan University, Taipei, Taiwan
Graduate Institute of Brain and Mind Sciences Sep 2021 – Dec 2021
Teaching Assistant (part-time)
- Principal Investigator: Associate Professor Joshua Oon Soo Goh, Graduate Institute of Brain and Mind Sciences, National Taiwan University
- Assisted with the Cognitive Science course by coordinating with instructors to confirm requirements, collecting assignments and grades, and recording class attendance

National Chengchi University, Taipei, Taiwan
Department of Economics Jun 2021 – Aug 2021
Research and Administrative Assistant (full-time)
- Principal Investigator: Professor Shu-Heng Chen, Department of Economics, National Chengchi University
- Managed the Ministry of Education (MOE) Talent Cultivation Project for Digital Humanities by organizing meetings and events, maintaining the project website, and coordinating with course instructors

National Chengchi University, Taipei, Taiwan
Department of Psychology Jan 2021 – Dec 2021
Research Assistant (part-time)
- Principal Investigator: Associate Professor Lee-Xieng, Yang, Department of Psychology, National Chengchi University
- Applied the Hierarchical Dirichlet Process Mixture Model for text analysis using R

Taipei City Government, Taipei, Taiwan
Public Transportation Office Jul 2020 – Dec 2020
Substitute Military Service (compulsory)
- Carried out administrative duties
- Managed the setup and maintenance of functions and venues

National Chengchi University, Taipei, Taiwan
Department of Psychology Apr 2020 – Jun 2020
Research Assistant (part-time)
- Principal Investigator: Professor Wen-Yau Hsu, Department of Psychology, National Chengchi University
- Retrieved and organized identification and phone records (raw experimental data) of callers to the Lifeline Association in Taipei using Python
- Supervised the progress of the verbatim transcription work
- Analyzed the transcripts using tf-idf and LDA

National Chengchi University, Taipei, Taiwan
Department of Psychology Apr 2019 – Jun 2020
Research Assistant (part-time)
- Principal Investigator: Professor Ruey-Ming Liao, Department of Psychology, National Chengchi University
- Conceptualized and formulated mathematical models
- Fitted experimental data of rats to reinforcement learning models using MATLAB
- Analyzed and visualized experimental results using statistical techniques

National Chengchi University, Taipei, Taiwan
Department of Psychology Mar 2019 – Jun 2020
Research Assistant (part-time)
- Principal Investigator: Associate Professor Lee-Xieng, Yang, Department of Psychology, National Chengchi University
- Assisted in conducting experiments by instructing participants, running the experimental program, debriefing them on the experimental design, and recording their responses

CONFERENCE ABSTRACTS

- **Chen, C. Y.**, Wang, L. S., Wang, T. S., Hsing, C. C., Goh, J. O. S. (2024). Age differences in decision-making strategies to process featural vs. structural perturbations in environmental choice-outcome mappings. [Session D, #152]. Poster presentation and Data Blitz session at the Annual Meeting for the Cognitive Neuroscience Society, Toronto, Canada.
- Wang, L. S., Lee, Y. H., Chuang, J. Y., Wang, T. S., Wang, P. K., Chao, W. C., **Chen, C. Y.**, SU, Y. S., Goh, J. O. S. (2023). Greater distance judgment distortion is associated with more subjective than objective representational similarity in extrastriate functional responses in older compared to younger adults. PSTR570.30/VV54. Poster presentation at the Annual Meeting for the Society for Neuroscience, D. C., USA.
- Wang, P. K., Lee, Y. H., Chuang, J. Y., Wang, C. L. S., Chao, W. C., **Chen, C. Y.**, Su, Y. S., Goh, J. O. S. (2023). Different Strategic Neural Correlates Representing Distances Implicates Age-related Distortions in Spatial Navigation. Poster presentation at the Annual Meeting for the Cognitive Neuroscience Society, Boston, USA.
- Lee, Y. H., Chuang J. Y., Wang P. K, Wang T. S., Wang C. L. S., Chao W. C., **Chen C. Y.**, Su Y. S., Goh, J. O. S. (2023). Neural Representations of Age-related Distance Distortion in Human Spatial Navigation. [TSCN20230033]. Oral presentation at the Annual Meeting for the Taiwan Society of Cognitive Neuroscience, National Central University, Taoyuan, Taiwan.

CERTIFICATES

- Deep Learning Specialization (deeplearning.ai, Coursera): Neural Networks and Deep Learning, Improving Deep Neural Networks, Structuring Machine Learning Projects, Convolutional Neural Networks, Sequence Models

SKILLS

- **Computational Skills:** C, C++, Python, R, MATLAB, SPM12, PsychoPy, Psychtoolbox, Linux, LaTeX, HTML, CSS
- **Languages:** Mandarin & Taiwanese Hokkien (native), English (fluent, TOEFL 103), Japanese (advanced, N1), French (basic)

RESEARCH INTERESTS

- Investigating how model-based decision-making is represented and processed in the brain
- Exploring the role of cognitive control in shaping decision-making processes
- Quantifying neurocomputational processes in decision-making using reinforcement learning and other machine learning approaches