Ching-Chih Amber Tsao

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RESEARCH STATEMENT

My research interests focus on **Human-AI Decision Making**, at the intersection of **Human-Robot Collaboration**, **Human-Centered AI**, and **Brain Dynamics**. My previous research projects utilized EEG analysis to assess users' trust behavior and decision-making strategies during human-robot collaboration.

EDUCATION

Aug. 2023 – May 2025	**Dual M.S. in Applied Information Science and Information Systems** Cornell University, USA & Technion – Israel Institute of Technology, Israel Connective Media Concentration, Merit-based Scholarship Recipient Advisor: *Prof. Wendy Ju*
Jun. 2023	**B.S. in Management Information Systems** National Chengchi University, Taiwan Advisor: *Prof. Shih-Yi Chien*

EXPERIENCES

Jan. 2024 – Present	**Future Automation Research Lab, Cornell University** Research Assistant, Advisor: *Prof. Wendy Ju* - Researching on social discomfort and awkward silence on share-rides
Dec. 2020 – Aug. 2023	**Human-Automation Interaction Lab, National Chengchi University, Taiwan** Research Assistant, Advisor: *Prof. Shih-Yi Chien* EEG Team Lead *(Apr. 2021 - Aug. 2023)* - Researched on the impact of **explainable AI** on building trust in **human-generative-AI collaboration** - Researched on the **decision-making** process in **human-robot collaboration** [HICSS-56] - Researched on **neuromarketing** strategies in human-robot interaction [HRI'23] - Researched on **topic modeling** the shifting research trends in the HRI fields [HRI'22] - Conducted workshop on **EEG data analysis**
Jul. 2022 – Aug. 2022	**Innovation R&D Department, Sinyi Realty Inc., Taiwan** Data Analyst Summer Intern - Developed the Address Plaque Recognition API: an **image recognition API** for collecting addresses, reduced time spent on typing addresses by 80%

PUBLICATIONS

Peer Reviewed Conference Papers

[C4] **Human-Robot Interaction in E-Commerce: The Role of Personality Traits and Chatbot Mechanisms – A Neuromarketing Research**
Yu-Wen Chang, Shih-Yi Chien, Yao-Cheng Chan, <u>Ching-Chih Tsao</u> (Mar. 2024)
*Comp. ACM/IEEE International Conference on Human-Robot Interaction **(HRI '24).** Boulder, CO.*

[C3]   **The Influence of a Robot Recommender System on Impulse Buying Tendency**
Ching-Chih Tsao, Cheng-Yi Tang, Yu-Wen Chang, Yin-Hsuan Sung, Shih-Yi Chien, and Szu-Yin Lin (Mar. 2023)
*Comp. ACM/IEEE International Conference on Human-Robot Interaction **(HRI '23)**. 672-676. Stockholm.*

[C2]   **Assessing the Decision-Making Process in Human-Robot Collaboration Using a Lego-like EEG Headset**
Ching-Chih Tsao, Hao-Hsiang Chuang, Tsu-Han Tsao, Cheng-Yi Tang, Yu-Wen Chang, Chih-Ling Chu, Chi-Chien Sung, Cheng-Lin Hsieh, Yuan-Pin Lin, and Shih-Yi Chien (Jan. 2023)
*Proc. Hawaii International Conference on System Sciences **(HICSS-56)**. 1529-1538. Maui, HI.*

[C1]   **A Machine Learning Approach to Model HRI Research Trends in 2010~2021**
Chan Hsu, Ching-Chih Tsao, Yu-Liang Weng, Cheng-Yi Tang, Yu-Wen Chang, Yihuang Kang, and Shih-Yi Chien (Mar. 2022)
*Proc. ACM/IEEE International Conference on Human-Robot Interaction **(HRI '22)**. 812-815. Online.*

SERVICES

Teaching Assistant	**Break through Tech - AI Studio**, Cornell University	*2023*
	• Mentored 20+ undergraduate student on their ML projects	
	• Meet twice a month with 4 groups of students to provide suggestions on improving models' performance and keep track on the projects' progress	
	Introduction to Computer Science, National Chengchi University	*2022*
	• Introduced git and front-end web development in class	
Workshop Speaker	**Introduction to EEG Analysis**, National Chengchi University	*2023*
Reviewer	Alt. CHI 2023, HRI 2023	
Student Ambassador	Cornell Tech Student Ambassador	*2023*
	UNESCO Hong Kong SDGs Ambassador (Golden Merits)	*2018*

HONORS AND AWARDS

Conference Travel Grants – HRI'24, Boulder, CO, USA	*2024*
Merit-based Scholarship, Cornell University	*2023*
Research Scholarship, NSTC of Taiwan	*2021 - 2023*
Conference Travel Grants – HICSS-56, Maui, HI, USA	*2022*
Academic Excellence Award, National Chengchi University (Ranked #1/80)	*2020*

SKILLS

Programming Languages	**Python**, **MATLAB**, **JavaScript**, **Java**, R, Swift
Tools	**Emotiv**, **EEGLAB**, **TensorFlow**, **PyTorch**, Selenium, Git, Figma, jQuery
Languages	English, Mandarin