

# Ching-Chih (Amber) Tsao

Research Assistant | Cornell University, NYC

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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 investigated factors that impact human trust in robotic systems. By analyzing EEG signals, system logs, and questionnaires, I have been able to identify specific patterns in participants' decision-making strategies.

## SKILLS

Programming Languages	Python, MATLAB, JavaScript, Java, R, Swift, C#
Tools	Emotiv, EEGLAB, TensorFlow, Keras, Git, GitHub, MNE, Vue.js
Languages	English, Mandarin

## EXPERIENCES

Dec. 2020 – **Human-Automation Interaction Lab, National Chengchi University, Taiwan**

Aug. 2023 Research Assistant, Advisor: Dr. Shih-Yi Chien

EEG Team Lead (Apr. 2021 - Aug. 2023)

Selected Research Projects

Trust in LLM / ChatGPT's Explanations on Computational Thinking Tasks [\[HICSS-56\]](#) (Ongoing)

Python / Emotiv / JavaScript / MNE / MATLAB / EEGLAB

- Analyze EEG signals by participants' decision-making phases in human robot collaboration
- Provide valuable insights into how individuals with varying computational thinking abilities perceive and rely on robotic assistance

Factors affecting Impulsive Buying Behavior in HRI [\[HRI'23\]](#)

Python / Emotiv / JavaScript / MATLAB / EEGLAB

- Examined the influences of a robot recommender system on human impulse buying tendency in online e-commerce contexts
- Investigated participants' real-time cognitive perceptions toward different experimental conditions (i.e., marketing plans: limited quantity vs. discount rate and robotic agents: intimate vs. unintimate)

Topic Modeling the HRI research trends [\[HRI'22\]](#)

Python / R / Selenium

Identified the shifting research trends in the HRI fields by analyzing articles published in the past decade

Jul. 2022 - **Innovation R&D Department, Sinyi Realty Inc., Taiwan**

Aug. 2022 Data Analyst Summer Intern

Address Plaque Recognition API

Python / TensorFlow / Google Cloud Platform / HTML / CSS / JavaScript

Developed an image recognition API for collecting addresses, reduced time spent on typing addresses by 80%

## EDUCATION

Aug. 2023 - **M.S. in Information Systems with a Concentration in Connective Media**

May 2025 **M.S. in Applied Information Science**

(Expected) Cornell University, USA & Technion – Israel Institute of Technology, Israel

Sep. 2020 - **B.S. in Management Information Systems** (GPA: 3.92/4.3)  
 Jun. 2023 National Chengchi University, Taiwan  
 Advisor: Dr. Shih-Yi Chien

## PUBLICATIONS

### Peer Reviewed Conference Papers

- [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. Hawaii.
- [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, Cornell University 2023 (250 students)
	<ul style="list-style-type: none"> <li>Mentoring 20+ Undergraduate Student on their AI studio projects</li> </ul>
Workshop Speaker	Intro to Computer Science, National Chengchi University 2022 (150 students)
	<ul style="list-style-type: none"> <li>Introduced git and front-end web development in class</li> </ul>
Reviewer	CHI 2023, HRI 2023
Student Ambassador	UNESCO Hong Kong SDGs Ambassador 2018 (Golden Merits)

## HONORS AND AWARDS

Merit-based Scholarship, Cornell University (20,000 USD)	2023
Research Scholarship, NSTC of Taiwan (equivalent to 7,000 USD)	2021 - 2023
Conference Travel Grants - HICSS-56, Maui, Hawaii, USA	2022
Academic Excellence Award, National Chengchi University (Ranked #1/80)	2020