Ching-Chih Tsao

Taipei, Taiwan
cctsao2000@gmail.com

RESEARCH INTERESTS

Human-Centered Data Science, Human-Centered AI, Brain Dynamics in Decision-Making, Human-AI Interaction, AIoT

EDUCATION

National Chengchi University *Taipei, Taiwan* *Sep. 2020 - Jun. 2023 (Expected)*
B.S. Management Information Systems

GPA: Major: 4.13/4.3, Overall: 3.88/4.3
Honors: Academic Excellence Award - Fall, 2020 (Ranked #1/80)
Selected Courses: Data Structure (**A+**), Object-Oriented Programming (**A+**), User Experience Design (**A+**), CNN and Visual Recognition (**A+**), Business Analytics (**A+**), Business Data Communication (**A+**)

City University Of Hong Kong *Kowloon, Hong Kong* *Sep. 2018 - Jun. 2020*
Information Management (Business Intelligence Stream)

Transferred to National Chengchi University
Selected Courses: Database Management (**A+**), Business Statistics (**A**)

RESEARCH EXPERIENCE

AI Research Center, National Chengchi University *Advisor: Shih-Yi Chien* *Dec. 2020 - Present*

Research Assistant

- Conducted research projects funded by the National Science and Technology Council, Taiwan
- Researching on **Impulsive Buying**
- Researched on **Human Decision-Making Process in Human-Robot Collaboration** [HICSS-56]
  - Led a team of 7 fellow students
  - Studied how different levels of computational thinking ability affect the decision-making process in human-robot collaborative contexts
  - Analyzed the EEG signal and explained participants' behaviors
- Researched on **Team Effectiveness in Augmented Reality Collaborative Learning Tasks** [TAICHI'21]
  - Studied how team familiarity affects team effectiveness in AR collaborative learning tasks
  - Analyzed the data of EEG Hyperscanning to detect inter brain synchronization in the pilot test
  - Contributed to the experimental design
- Researched on **HRI research trends using Topic Modeling** [HRI'22]
  - Automated the data extraction process through web crawlers from 11 static/dynamic websites
  - Processed data cleansing and created the document-term matrix
  - Interpreted the Deep Nonnegative Autoencoder model output and discussed the shifting trends in the HRI fields over the past decade

Skills involved: Python, MATLAB, EEGLAB, R, Selenium

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

Data Analyst Summer Intern

- Developed an address plaque recognition API, save 80% time of typing in text
- Adjusted the computing process of the system, raise address recognition accuracy from 50% to 83%

Skills involved: Python, TensorFlow, Keras, Cloud AutoML

PUBLICATION

[1] **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, Shih-Yi Chien (2023.01). "Assessing the Decision-Making Process in Human-Robot Collaboration Using a Lego-like EEG Headset." Accepted by the Hawaii International Conference on System Sciences (HICSS-56). HICSS, Hawaii.

[2] Chan Hsu, **Ching-Chih Tsao**, Yu-Liang Weng, Cheng-Yi Tang, Yu-Wen Chang, Yihuang Kang, Shih-Yi Chien (2022.03). "A Machine Learning Approach to Model HRI Research Trends in 2010~2021." In Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction (HRI '22). pp 812-815. IEEE Press, Hokkaido.

[3] **Ching-Chih Tsao**, Man-Jiun Chi, Shih-Yi Chien, Yuan-Pin Lin (2021.07). "The Effect of Team Familiarity in Collaborative Learning Tasks: An AR+EEG Exploratory Study." In Proceedings of the 7th Annual Conference of Taiwanese Association of Computer-Human Interaction (TAICHI '21). pp 125-128. TAICHI, Taipei.

TEACHING

Department of Management Information Systems, National Chengchi University

Teaching Assistant on Introduction to Computer Science (Fall, 2022) *Sep. 2022 - Present*

- Introduced Front-end Web Development in class
- Designed homework on HTML, CSS, JavaScript

HONORS AND AWARDS

- Longshan Temple Scholarship, National Chengchi University, 2020
- Academic Excellence Award, National Chengchi University, 2020
- **Sustainable Development Goals Ambassador Golden Merits**, UNESCO Hong Kong, 2018
- **Best Presentation Team Award** - Champion (Tertiary Division), "Digital Empowerment of Girls in Brazil.", PLAN International Hong Kong Youth Conference, 2018

SKILLS

- **Languages:** Python, Java, JavaScript, MATLAB, R, Swift
- **ML framework:** TensorFlow, Keras, Scikit-learn, Turi Create
- **Tools:** EEGLAB, Figma, Google Cloud Platform, Google Analytics, Arduino

LANGUAGES

- Mandarin (Native)
- English (Fluent, IELTS 7.5/9.0, Oct. 2022)