

Chun-Yuan (Tony) Huang

<https://tonycytw.github.io/>

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- RESEARCH INTERESTS** **Methodology:** high-dimensional statistics, dynamical systems, Bayesian statistics
Applications: human genetics, public health, cognitive psychology
- EDUCATION** **The University of Texas at Dallas, TX** May 2023
Master of Science, Statistics
Concentration: Data Science
- National Cheng Kung University, Tainan, Taiwan** May 2018
Bachelor of Science, Statistics
Minor: Political Science
- PUBLICATIONS** Ahmad Z., Xing C., Khera A., **Huang C.Y.**, Brandt E.J., MacDougall D.E., Ahmed C.D., McGowan M.P., Wilemon K.A., Myers K.D. (2022+). *Using Healthcare Claims Data and Machine Learning to Identify Health Disparities for Individuals with Diagnosed and Undiagnosed Familial Hypercholesterolemia*. Under review in Journal of the American Heart Association.
- Huang C.Y.**, Yang C.T., and Fific M. (2018). *System Factorial Technology Provides New Insights on Hybrid Search*. In poster presented at 59th Psychonomic Society Annual Meeting.
- CURRENT PROJECT** *Network and Change-point Estimation on Single-Cell RNA Sequencing (scRNA-seq) Pseudotime Trajectories.*
- RESEARCH EXPERIENCE** **McDermott Bioinformatics Lab** Dec. 2021 – Present
The University of Texas Southwestern Medical Center (UTSW), USA
Advisor: Dr. Chao Xing
- Perform projects in genomics and public health as a collaborator and research on dynamical network inference for scRNA-seq as the lead researcher.
 - Contribute to the project by performing statistical consulting, data wrangling in R and modeling using logistic regression to identify health disparities with medical professionals in UTSW.
 - Develop a time-varying graphical LASSO framework to perform network estimation based on inverse covariance; implement parallel computing with C++ and R; assess functions in a Linux bash environment.
 - Provide statistics and high-performance computing information support to the researchers in UTSW.
- Visual Cognition and Modeling Lab** Sep. 2016 – June 2018
National Cheng Kung University, Taiwan
Advisor: Dr. Cheng-Ta Yang
- Performed research on human visual search in cognitive psychology as the lead researcher and first author.
 - Designed and executed the hybrid search experiment using eye-tracking software (Eyelink); collected large eye movement datasets from 55 participants; pre-processed reaction time data using R.
 - Implemented system factorial technology (SFT) and ANOVA to hybrid search reaction time data using R and MATLAB, analyzed the results, and wrote the hybrid search paper.
 - Supported various lab duties including participant recruitment and scheduling and experiment assistance.

AWARDS	<p>2018 59th Psychonomic Society Graduate Conference Award (10% acceptance rate) – \$1,000</p> <p>2017 National Science Council of Taiwan Undergraduate Student Thesis Award – \$1,000</p>
INDUSTRY EXPERIENCE	<p>Crédit Agricole CIB, Taiwan Dec. 2018 – Dec. 2020 Assistant Relationship Manager, Financial Institutions Coverage</p> <ul style="list-style-type: none"> • Produced statistical exhibits and slides for Taiwanese financial industry and international bond market trends research; prepared pre-meeting briefing materials for C-level client meetings. <p>GfK Retail and Technology Ltd., Taiwan Jan. 2018 – June 2018 Market Research Intern</p> <ul style="list-style-type: none"> • Responsible for reporting automation projects using R and VBA, decreasing data processing time by up to 25%.
ADDITIONAL INFORMATION	<p><i>Technical:</i> R, C++, Python, Bash, SAS, MATLAB, SQL, Data Visualization (Tableau, R shiny), Reporting (R Markdown, LaTeX).</p> <p><i>Languages:</i> Mandarin, English.</p>