

# Jay Chiehen Liao, BS, BBA

Institute of Data Science, College of Management, National Cheng Kung University  
No. 1, University Rd., East Dist., Tainan City 701, Taiwan

M: +886-988818967 | P: +886-6-2757575 ext 53634-25 | Email: [re6094028@gs.ncku.edu.tw](mailto:re6094028@gs.ncku.edu.tw)  
<https://github.com/jayenliao> | <https://rpubs.com/d920056>  
<https://orcid.org/0000-0002-1759-4971>  
<https://www.linkedin.com/in/jay-chiehen-liao-97927b157>

## EDUCATION

### National Cheng Kung University

Tainan City, Taiwan

#### Master of Business Administration in Data Science

Sept 2020 – June 2022 (expected)

- The 1<sup>st</sup> place, Academic performance of the first semester (Fall, 2020)
- The 2<sup>nd</sup> place, Entrance examination 2019
- Adviser: Dr. Cheng-Te Li

GPA: 4.21/4.30

#### Double Degree of Bachelor (Overall GPA: 3.86/4.30)

Sept 2015 – June 2020

#### Bachelor of Business Administration in Statistics

GPA of required courses: 3.75/4.30

#### Bachelor of Science in Psychology

GPA of required courses: 3.98/4.30

## EMPLOYMENT

### National Cheng Kung University

Tainan City, Taiwan

#### Research and Teaching Assistant, Institute of Data Science

Aug 2020 – Present

Networks and Artificial Intelligence Laboratory

Lab host: Dr. Cheng-Te Li

- Research topics: Graph neural network, social network and recommendation system.
- Managing Linux and CentOS servers.
- Assisted 4 courses: Data Science, Big Data Analysis, Social Network and Recommendation system.

#### Research and Teaching Assistant, Department of Public Health

Jan 2017 – Aug 2020

Health Behavior Laboratory

Lab host: Dr. Carol Strong

- Research topics: Health behavior interventions with technology, sexually transmitted infections and social network, adolescent mental health
- Conducted participants recruitment and protocols for Institutional Review Board.
- Assisted 1 course: Advanced Health Behavior Theories and Practices

## SKILLS

- Data Science and Machine Learning
- Statistical Methods, Data Analysis and Visualization
- Programming skills: Python & R (proficient), C++ (moderate)
- Other computer skills: LaTeX, Markdown, Linux server, MacOS, Microsoft Office, Google Doc, SPSS
- Language skills: English (TOEIC 925/990, TOEIC writing 190/200), Taiwanese (mother tongue), Taiwanese Mandarin and traditional Chinese (native), French (breakthrough)

## RESEARCH INTEREST

I focus on utilizing data science and information technology to develop systems that benefit human health and proposing commercial strategies to operate these systems. I have four main research topics:

1. Predicting patients' outcomes with graph neural network (GNN) and recurrent neural network (RNN).
2. Detecting medical misinformation with GNN and natural language processing (NLP).
3. Detecting psychological distress on the social media with GNN and NLP.
4. Modeling time series data collected by wearable devices with RNN to develop sport and fitness recommendation systems.

## PUBLICATIONS \*corresponding author

---

Strong, C.\*, Wu, H. J., Tseng, Y. C., Yuan, C. W., Yu, Y. F., **Liao, J. C.**, Chen, Y. W., Hung, Y. C., Li, C. W., Huang, P. H., Ko, N. Y., Ku, S. W. W. (2020). A Mobile App (UPrEPU) to Monitor Adherence to Pre-Exposure Prophylaxis in Men Who Have Sex with Men: A Protocol for a User-Centered Approach Mobile App Design and Development. *The JMIR Research Protocols*, 9(12), e20360.

**Liao, J. C.** (2017). Taiwanese Young People Engaged in Issues of Marriage Equality and LGBTQ in 2016 (text in Chinese). *Magazine of National Cheng Kung University*, vol 255, 50-55.

## CONFERENCE PRESENTATIONS presenting author, \*corresponding author

---

### International Conferences

Ku, S. W. W.\*, Li, C. W., Huang, P., Strong, C., Garner, A., Howell, S., Wu, T. H., **Liao, J. C.**, Ko, N. Y., and Bourne, A. (May 2020). *Factors Associated with Uptake of Event-Driven and Daily Regimen of Pre-exposure Prophylaxis among Gay, Bisexual and Other Men Who Have Sex with Men in Taiwan: 2019 Hornet PrEP Survey*. Oral presentation at the 23<sup>rd</sup> International AIDS Conference (AIDS 2020), San Francisco, California.

**Liao, J. C.\***, Yu, Y. F., & Strong, C.\* (Sep 2019). *The Influence of the Venue-Based Network to the Anogenital Human Papillomavirus Infection in Men who Have Sex with Men: An Application of Temporal Network Autocorrelation Model*. Oral presentation at the 4<sup>th</sup> European Conference of Social Network (EUSN 2019), Zurich, Switzerland.

Yu, Y. F.\*, Ting, T. T., **Liao, J. C.**, & Strong, C.\* (Sep 2019). *Effects of Depressive Symptom and Stressful Life Events on Friendship Dynamics in Adolescence*. Poster presentation at the 4<sup>th</sup> European Conference of Social Network (EUSN 2019), Zurich, Switzerland.

**Liao, J. C.**, Zhou, H., Yu, Y. F., Ku, W. W., Ko, N. Y., & Strong, C. (Oct 2018). *The Influence of the Venue-Based Social Network to The Human Papillomavirus Infection of Men Who Have Sex with Men in Southern Taiwan*. Poster presentation at the 32<sup>nd</sup> International Papillomavirus Conference (IPVC 2018), Sydney, Australia.

Yu, Y. F., Zhou, H., **Liao, J. C.**, Ku, W. W., Ko, N. Y., & Strong, C. (Oct 2018). *Incidence and Associated Factors of Anogenital Human Papillomavirus Infection in A Community Sample of Men Who Have Sex with Men in Taiwan*. Poster presentation at the 32<sup>nd</sup> International Papillomavirus Conference (IPVC 2018), Sydney, Australia.

### Domestic (Taiwanese) Conferences

**Liao, J. C.\***, Lee, T. J., & Sheu, C. F. (Dec 2020). *Data Analysis of Three Votes of Kaohsiung City in 2018-2020: Focus on Associations between the Approval Rates of Han Kuo-Yu and Demographic Variables* (presented in Mandarin). Oral presentation at 2020 Annual Conference of Taiwan Political Science Association, Taipei, Taiwan.

**Liao, J. C.\***, Wu, M. H., Su, W. L., & Huang, P. H. (Nov 2019). *Scale of Perceived Stressor for Taiwanese Undergraduates: An Application of Multidimensional Forced-Choice* (presented in Mandarin). Oral presentation at 2019 Annual Conference of Taiwan Psychological Association, Kaohsiung, Taiwan.

**Liao, J. C.\***, Lin, Z. Y., Tsai, M. T., & Strong, C. (Sep 2019). *Associations among same-sex attraction, childhood gender nonconformity and discrimination experiences: Findings from structural equation models in a sample of male adolescents in Taiwan* (presented in Mandarin). Oral presentation at 2019 Annual Conference of Taiwan Public Health Association, Taipei, Taiwan.

**Liao, J. C.**, Yu, Y. F.\*, Yang, T. J., & Cheng, C. P. (May 2019). *Data Analysis of Referenda in Taiwan in 2018: Association among Agreement Rate and Sociodemographic Indices of Counties and Cities* (presented in Mandarin). Poster presentation at 2019 United Annual Conference of Taiwan Applied Psychology Association and Taiwan Association of Biofeedback and Neurofeedback, Kaohsiung, Taiwan.

## HONORS & AWARDS

---

<b>The First Place Award (out of 401 teams), Chunghwa Post Big Data Competition 2019</b> Chunghwa Post Co., Ltd.	June 2019
<b>Top 20%, Commercial Big Data Competition 2020</b> Department of Finance, National Sun Yat-Sun University and Taishin International Bank Co., Ltd.	Dec 2020
<b>Top 25%, AI CUP Fall 2020 - Medical Information De-identification</b> Intelligent Knowledge Management Laboratory, National Chen Kung University	Jan 2021
<b>Research Grants for Undergraduate Students</b> Taiwan Ministry of Science and Technology <ul style="list-style-type: none"><li>Project Title: The association of LGBTQ-friendly-venue-based network and Human Papillomavirus infection of men who have sex with men: findings in a cohort in Southern Taiwan</li><li>Adviser: Dr. Carol Strong</li></ul>	June 2018
<b>Excellent Award, Certificate of Statistic Analysis</b> The Chinese Applied Statistics Association	May 2019
<b>Advanced Award, Competition of Statistics</b> National Cheng Kung University	May 2017

## ACTIVITIES

---

<b>Tainan Rainbow (LGBTQ) Parade</b> Director, Team of Traffic Affairs Director, Team of Photography & Filming Member, Team of Photography & Filming	<b>Tainan City, Taiwan</b> Oct 2019 – May 2020 Oct 2017 – Mar 2018, Mar 2019 – Apr 2019 Nov 2016 – Jan 2017
<b>Tainan Pink Dot</b> (A gender equity activity) Coordinator Stage Host	<b>Tainan City, Taiwan</b> Dec 2017 – May 2018 Feb 2017 – May 2017
<b>Student Activities in National Cheng Kung University</b> Member, Gender Equity Education Committee Member, Course Committee, Gender Study Program Director, TO. LESBIANS & QUEERS (Gender friendly club) Photography & Artistic Design, Freshmen Camp of Department of Psychology 2017 Academic Affairs, TO. LESBIANS & QUEERS Club Public Relation, Photography Club Public Relation, Students Association of Department of Psychology	<b>Tainan City, Taiwan</b> Sept 2017 – June 2018  Oct 2016 – Oct 2017 Sept 2016 – June 2017 Sept 2015 – June 2016

## REFEREES

---

### Cheng-Te Li, PhD

Associate Professor, Institute of Data Science, College of Management, National Cheng Kung University  
No.1, University Rd., East Dist., Tainan City 701, Taiwan  
Tel: +886-6-2757575 ext 53628  
Email: [chengte@mail.ncku.edu.tw](mailto:chengte@mail.ncku.edu.tw)

### Carol Strong, PhD, MPH

Associate Professor, Department of Public Health, College of Medicine, National Cheng Kung University  
8F-8068, No. 138, ShengLi Rd., North Dist., Tainan City 704, Taiwan  
Tel: +886-6-2353535 ext 5963  
Email: [carol.chiajung@gmail.com](mailto:carol.chiajung@gmail.com)

  
30 April 2021