

## Curriculum Vitae

Name: **Yi-Ju Jean Lee** 李易儒

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### EDUCATION & RESEARCH EXPERIENCE

#### ● Academia Sinica

- Postdoctoral Fellow, Academia Sinica 01/2023 – Present
- Senior Research Associate, Institute of Statistical Science, Academia Sinica 07/2020 – Present

#### Certificated Training Accomplishments :

- Advanced Certificate, OXCEP in Academic Medicine, University of **Oxford**, UK 07/2025
- Economic and Social Council Youth Forum, **United Nations** 2025 04/2025
- Causes and consequences of the digital divide, ITU Academy and **UNU-MERIT** 04/2025  
(Graduated with the highest academic score record in history since 04/2025.)
- Introduction to the International Health Regulations (IHR), **WHO Academy** 03/2025
- Developing Skills for Women Leadership in Climate Action, **UNITAR** 03/2025
- Young Leader Training Program, Institute for Training and Research, **United Nations** 08/2024
- Executive Program of AI in Health Care, Sloan School of Management, Massachusetts Institute of Technology (**MIT**), USA 07/2023
- **APEC** Scientific Leadership Program Young Researchers Fellowship 08/2022
- Diploma, OXCEP, University of **Oxford**, United Kingdom (selected as 1 of 25 trainees nationwide) 07/2022
- National Health Research Institutes of Taiwan, Precision Medicine Seed Talent Training Program (國家衛生研究院台灣精準醫療種子人才訓練計畫)
- Introduction to the Principles and Practice of Clinical Research Course, **NIH**, USA 03/2021–2022
- Taiwan AI Academy- Smart Medicine Program (Certified No. AH091108)
- ✓ **Project Manager** (PI : Dr. Chun-houh Chen) 01/2021 – Present  
Smart Health Project, Academia sinica (中央研究院一般學術研究生醫資料智慧化計畫)  
Smart Medicine Project, Academia sinica (中研院一般學術研究人體生物資料庫智慧醫療計劃)
- ✓ **Principal Investigator Associate** 01/2024– Present  
National Science and Technology Council (NCST) and National Cheng Kung University  
Title: *Exploring the Molecular and Pathophysiology Role of CHAC1 in Renal Fibrosis Leading to Chronic Kidney Disease*
- ✓ **Project Manager**: 中央研究院資料科學合作社委託三軍總醫院研究案 05/2022 – Present  
Title: *Machine Learning Approaches for the Prediction of Colorectal Cancer Using Two National Scale Database from Taiwan* (PI : Dr. Chun-houh Chen)
- ✓ **Project Manager**: Academia Sinica Seed Program (PI : Dr. Su-Yun Huang) 01/2021 –01/2023  
Title: *Facilitating AI Medical Models with Statistical Methods: A Study of Genomics and Medical Images*
- ✓ **Project Manager**: MIAI-2020-M2-03 (PI : Dr. Chun-houh Chen) 10/2020 –10/2021  
Medical Imaging Big Data Establishment and Application Research Project  
(醫療影像之巨量資料建立與應用研究專案計畫-醫療影像資料庫)

*Title: Pulmonary Disease Detection and Classification with Deep Statistical Learning*

- ✓ **Adjunct Assistant Professor:** Department of Finance, Shih Hsin University 09/2022- 06/2023  
Classes: “AI applications in Finance (2 credits)”, “Statistics for Everyone (2 credits)”

- ✓ **Research Assistant:** MOST107-2118-M-001-012-MY3 (PI : Dr. Su-Yun Huang) 07/2020 – 07/2021  
*Title: Model Selection Problems in Principal Component Analysis and Scalable Geometric Algorithms with Extensions*

✓ **Service:**

⊙ **Academic Journal Review Service**

- (1) **Guest Editor**, Aperture Neuro 09/2024-Present
- (2) Reviewer, PLOS ONE 03/2025-Present
- (3) Reviewer, Journal of Taiwan Intelligent Technologies and Applied Statistics 2024-Present
- (4) Reviewer, OHBM Conference Abstract Reviewer 2021-Present
- (5) Reviewer, OHBM Educational Courses, Oral Presentation, Symposium Reviewer 2023-Present

- ⊙ **Country Researcher (Taiwan)**, Global Index on Responsible AI (GIRAI), LIRNEasia & Global Center on AI Governance 2025- Present

- ⊙ **Young Statistician Representative**, International Association of Statistical Computing 24–Present

- ⊙ **Member**, Public Voice Blog & Article Group, International Statistical Institute (ISI) 2025- Present  
Member, Public Voice Consortium, International Statistical Institute (ISI) 2024-Present

- ⊙ **Advisory Member**, Youth Advisory Council of Hsinchu County, Taiwan 2023-Present  
County Youth Representative, overseeing the government and providing regular advice and policy consultations. A total of 16 proposals, please see the last page of this CV.

- ⊙ **Local Liaison**, Deloitte Research Security Project funded by the U.S. Department of State  
Topic: Protecting Your Research in a Digital Age 2024- Present

- ⊙ **Founding Chair**, NeuroAI-SIG Preparatory Committee, OHBM 2025-Present

- ⊙ **Member**, Best Practice Committee, Organization for Human Brain Mapping (OHBM) 2025-2028

- ⊙ **Member**, Education Committee, Organization for Human Brain Mapping (OHBM) 2023-2026  
Being the sole representative from the Asian region among the 6 committee members. The Organization of Human Brain Mapping is an international flagship organization in the field of brain science, with annual conferences attracting over 4,000 participants.

- ⊙ **Member**, Program Committee, Organization for Human Brain Mapping (OHBM) 2023-2026  
Being one of the twenty-four representatives worldwide. As Keynote Speech Host, Oral Session Hosts.

- ⊙ **Member**, Fundraising Committee, Organization for Human Brain Mapping (OHBM) 2023-2025

- ⊙ **Exhibition Manager**, Brain Art Special Interest Group, OHBM 2024-Present  
Exhibition Manager-Elect & Liaisons at SEA-SIG committee, BrainArtSIG OHBM 2023-2024

- ⊙ **Treasurer**, Open Science SIG, Organization for Human Brain Mapping (OHBM) 2023-2024  
Treasurer Elect, Organization for Human Brain Mapping (OHBM) Open Science SIG 2022-2023  
Supporting Hackathon and Open Science activities

- ⊙ **Consulting Service, Data Science Statistical Cooperation Center**, Academia Sinica 02/2021- Present

- ⊙ **Webmasters**, Deep Learning Group and Smart Health Project, ISS, Academia Sinica 10/2021- 01/2024
- ⊙ **GPU F&A**, Smart Health Project, Academia Sinica 11/2021- 01/2024
- ⊙ **Host, Postdoc Seminar**, Institute of Statistical Science, Academia Sinica 08/2023- 01/2024  
02/2021- 07/2021
- ⊙ **Member**, Local Organization Committee, Statistical Computing And Robust Inference For High  
Dimensional Data 08/2023 – 12/2023

## Education

- **Doctor of Philosophy** : (GPA 4.06) 08/2016 – 06/2020
  - **Interdisciplinary Neurosciences, Taiwan International Graduate Program (TIGP-INS)**  
**Academia Sinica & National Yang-Ming University** (Certified No. 40538002)
  - Applied Artificial Intelligence in Bio-Medicine Program, NYMU (Certified No. 10922004)  
Primary Advisor: Albert C. Yang M.D. Ph.D. Co-advisor: Huang Su-Yun Ph.D.
  - ✓ **Research Interests**: Brain Imaging Analysis, Nonlinear Analysis in Complex System, Psychiatry Disorder
  - ✓ **Project Manager / Research Assistant**: MOST 107-2634-F-075-002 2018 – 06/2021  
Laboratory of Precision Psychiatry, College of Medicine, NYMU  
*Title: Machine Learning Approach to Phenotyping Psychiatric Disorders Using Large-Scale Neuroimaging and GeneChip Data*
  - ✓ **Project Manager (Education Division)/ Research Assistant** : MOST 108-2634-F-002-0282018-06/2021  
Medical Data Analytics Laboratory, Institute of Applied Mathematical Sciences, NTU  
*Title: Artificial Intelligence for Medical Image Analysis and Clinical Workflows*
  - ✓ **Project Manager** 04/2021 – 06/2021  
Medical Imaging Big Data Establishment and Application Research Project  
*Title: Development of a Brain Imaging Diagnosis Platform for Assisting in the Discrimination of Brain Tumor-Related Diseases*
  - ✓ **Services during PhD study**:
    - ⊙ **President** of Language Exchange Club and **Dormitory Representative**, TIGP-SA, Academia Sinica 2018
    - ⊙ **TIGP-INS Program Representative**, Graduate Student Association, Academia Sinica 2017
- **Master Degree** : (GPA 4.25) 09/2011 – 06/2015  
Institute of Learning Sciences, Commission of General Education, National Tsing Hua University
  - ✓ Student Engagement, Systems Biology, Psychological Mechanisms under Cultural Contexts
- **Bachelor Degree** : (GPA 3.73) 09/2007 – 06/2011  
Department of Psychology, College of Medical Science and Technology, Chung Shan Medical Univ.
  - ✓ Clinical Psychology : Biofeedback, Animal Model of Parkinson's Disease, Social Psychology
  - ✓ Clinical Psychologist Intern at Dept. Psychiatry, MacKay Memorial Hospital 12/2010
  - ✓ Art Therapy Training at Tunghai University, Taichung, Taiwan 2009
- **Outstanding Scientific Education Program in Life Science by MOST** 09/2005 – 06/2007
  - ✓ Institute of Molecular Biology, National Tsing Hua University: Animal Model of Alzheimer's Disease

## AWARDS

- (1) 2025, Selected **Global Leader**, 2025 Women in Global Development (WILD) Leadership Network
- (2) 2025, Selected **Fellowship**, One Million Leaders-Asia (OMLAS) Fellowship Program 2025
- (3) 2025, co First Author of the Poster Award, Institute of Statistical Science, Academia Sinica
- (4) 2024, **FutureTech Award** (未來科技獎)
- (5) 2024, Scholarship Delegate of Universal Youth Leadership Summit - Thailand (UYLS-Thailand) awarded by World Goals Model United Nations and Universal Youth Movement
- (6) 2024, Selected as **Outstanding Youth** in the Hsinchu Region for the Youth Day 2024 (113 年青年節新竹地區社會優秀青年) awarded by China Youth Corps
- (7) 2023, **National Health Research Institute** Emerging Biomedical Technology and Medical Cross-disciplinary Talent Training Program - Smart Healthcare Group Proposal Excellence Award (國家衛生研究院新興生技醫療跨領域人才培訓計畫－智慧醫療組提案優勝獎)
- (8) 2023, Finalist of the 2023 Taipei City Technology Inclusion Civic Innovation Applied Competition - Data Innovation Category.
- (9) 2023 Elected to Academia Sinica 2023 Year Cultivation of Science and Technology Elites Program
- (10) 2023, 1<sup>st</sup> place of Poster Award, ISI-ISM-ISSAS Joint Conference, Institute of Statistical Science, Academia Sinica
- (11) 2023, Selected as a Postdoctoral Research Scholar at the Academia Sinica at the general level across the entire institution
- (12) 2023, Selected as Participant of **Global Young Scientists Summit** (GYSS)
- (13) 2022, the Honorable Mention Award, The ISS 40<sup>th</sup> Anniversary Conference with a theme In Memory of Academician Yuan-Shin Chow Photo Contest, Academia Sinica
- (14) 2022, Awardee of the BCG pilot grant 2022, **Asia-Pacific Economic Cooperation (APEC)**
- (15) 2022, 3<sup>rd</sup> place, English Speech Competition on “The Challenges and Opportunities of Working at Academia Sinica”, Academia Sinica, Taipei, Taiwan
- (16) 2022, Selected as **APEC SLP Young Researchers Fellowship (APEC)**
- (17) 2022, Selected as Seed Talent Trainee in Academic Medicine of OXCEP, University of Oxford  
(selected as 1 of 25 trainees nationwide)
- (18) 2022, Winner of Poster Award, Institute of Statistical Science, Academia Sinica
- (19) 2021, 1<sup>st</sup> place of Poster Award, Institute of Statistical Science, Academia Sinica
- (20) 2021, Selected as Viewer of Global Young Scientists Summit (GYSS)
- (21) 2020, Poster Award of the 3rd Annual Meeting of Taiwan Society of Engineering Technology and Practical Medicine-2020 Artificial Intelligence and Application in Medicine Conference
- (22) 2020, Poster Award of the 1<sup>st</sup> Asia-Pacific Computational and Cognitive Neuroscience (AP-CCN) Conference
- (23) 2020, 1st place of Clío: 3D art, 2020 Brain-Art Competition, Organization of Human Brain Mapping
- (24) 2020, 1<sup>st</sup> place of Popular Vote of Clío: 3D art, 2020 Brain-Art Competition, Organization of Human Brain Mapping
- (25) 2020, 1st place of Popular Vote of Erato: 2D art, 2020 Brain-Art Competition, Organization of Human Brain Mapping

- (26) 2020, Member of the **Phi Tau Phi Scholastic Honor Society** (NYMU)
- (27) 2019, 2nd Place of TIGP-INS Travel Grant Competition, Academia Sinica
- (28) 2019, Sponsorship for Attending International Conference, Ministry of Science and Technology, Taiwan (108-2922-I-010 -013)
- (29) 2015, Member of the **Phi Tau Phi Scholastic Honor Society** (NTHU)
- (30) 2015, Champion of National Tsing Hua University Academic English Writing Competition
- (31) 2012, International Visiting Student Award and Sponsorship, National Tsing Hua University
- (32) 2012, Language Proficiency (English) Award, National Tsing Hua University
- (33) 2007, Outstanding High School Youth in Life Sciences of Taiwan, Ministry of Education
- (34) 2006, Entries of The 5th Macronix Science Awards
- (35) 2005, Outstanding High School Youth of Republic of China, Ministry of Education
- (36) 2000, Millennium Dreamer in Talents by the Educational, Scientific and Cultural Organization of United Nations (**UNESCO**)

## ACADEMIC POSITIONS

### ● Membership

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|--|-------------------|
| (1) Cancer Informatics for Cancer Centers                        | 04/2025- Present  |
| (2) The Global Network for Science Communication                 | 02/2025- Present  |
| (3) International Statistical Institute                          | 06/2024- Present  |
| (4) International Association of Statistical Computing           | 06/2024- Present  |
| (5) Health Intelligent Medical Technology Development Society    | 06/2023- Present  |
| (6) The Chinese Institute of Probability and Statistics          | 05/2023 - Present |
| (7) Taiwan Precision Medicine Society (TPMS, #465)               | 09/2022 – Present |
| (8) Taiwan Medical and Health Information Management Association | 03/2021 – Present |
| (9) Taiwan Society for Biopreservation and Biobanking            | 11/2020 – Present |
| (10) Organization for Human Brain Mapping                        | 04/2020 – Present |
| (11) Taiwan Association for Medical Informatics                  | 04/2020 – Present |
| (12) Taiwan Bioinformatics and System Biology Society            | 10/2020 – Present |
| (13) Schizophrenia International Research Society                | 11/2018 – 11/2019 |
| (14) Neuroscience Society of Taiwan                              | 10/2016 – 10/2019 |
| (15) Taiwan Society of Sleep Medicine                            | 03/2018 – 03/2019 |
| (16) Taiwanese Psychological Association                         | 09/2009 – 09/2016 |

### ● License

- (1) Certificated **Machine Learning Engineer**  
 Issued by: Ministry of Economic Affairs, Taiwan (R. O. C.)
- (2) Certificated **Medical Information Manager** (Certified No. 109MIM011)  
 Issued by: Taiwan Association for Medical Informatics
- (3) Certificated **Medical Record Information Manager** (Certified No. 110-3126)  
 Issued by: Taiwan Medical and Health Information Management Association
- (4) First Aid Certification (Red Cross Society)  
 Issued by: Red Cross Society of Taiwan (R. O. C)

## ● Lecturer/ Invited Speech

- (1) Topic: Machine Learning and Deep Learning in the Analysis of Biomedical Data  
課程名稱與單位：「生物資訊與分析」中研院生醫圖書館教育訓練 08/05/2025
- (2) Topic: Panel Discussion- Mental Wellbeing an Resilience  
課程名稱：Track 2 of India Domestic OMLAS Champions Training Session 07/30/2025
- (3) Topic: AI applications in medical image analysis  
課程名稱：「統計基因體、代謝體學、醫學影像」國立陽明交通大學公衛所 04/28/2025
- (4) Topic: AI 在精準醫學中的變革力量－從典範探索到健康實踐  
課程名稱與單位：「書報討論」，淡江大學統計系 03/19/2025
- (5) Topic: The Next Frontier: Statistical Science and AI Reshaping Healthcare Analytics  
Seminar, TIGP Program on Social Networks and Human-Centered Computing 02/24/2025
- (6) Topic: Precision Medicine to Precision Engineering: Cross-Industry Insights from Big Data  
Analytics (精準醫療到精準工程：大數據分析的跨產業啟發)  
儀衡工程技術顧問有限公司 Integrated Engineering Evaluations Corp. 01/09/2025
- (7) Topic: The Next Frontier: Statistical Science and AI Reshaping Healthcare Analytics  
Psychology forum: many faces of open science. National Cheng Kung University 12/03/2024
- (8) Topic: Statistical Computing and Methodological Innovations in Multifaceted Precision Medicine:  
An AI-Enhanced Perspective 11/27/2024  
Institute of Statistical Science, National Tsing Hua University
- (9) Topic: The Next Frontier: Statistical Science and AI Reshaping Healthcare Analytics 10/31/2024  
Institute of Applied Mathematics, National Chung Hsing University
- (10) Topic: Engaging in Learning: The AI-led Transformation in Statistical Science and Medicine  
Department of Computer Science, National Tsing Hua University 10/16/2024
- (11) Bioinformatics series 11: ML and DL in the Analysis of Biomedical Data  
Classes: Bioinformatics Training Courses 06/18/2024  
Life Science Library, Academia Sinica
- (12) 2023 October to December (Lecture) “Machine Learning in Biomedical Data”, National Defense  
Medical Center and Academia Sinica Data Science Statistical Cooperation Center
- (13) Panel 4 “Open Data Governance and Infrastructure–Sharable Resources in Neuroimaging”  
(As Session Moderator) 07/25/2023  
Organizer: OHBM Open Science Special Interests Group
- (14) Basic concepts in Biological Statistics 06/26/2023  
Class Name: Biostatistics  
Institute of Biomedicine, National Taitung University
- (15) Kids Review: Traditional Chinese (Taiwan) 2023 - 跟著我們探索思覺失調症，解密變幻莫測的  
大腦活動 06/10/2023

Organizer: OHBM Diversity and Inclusivity Committee、IYBSSD, International Year of Basic Sciences for Sustainable Development - Taiwan Series Promotional Activities「基礎科學促進永續發展國際年--臺灣系列推廣活動」

Taipei City Library

- (16) “打造智慧健康生態圈－透過實踐 AI 素養提升醫療品質” 03/31/2023  
Class Name: Rural Smart Healthcare Implementation Special Project  
Department of Computer Science, National Tsing-Hua University
- (17) “善用 AI 工具於研究工作與教學－以生醫資料智慧化為例” AI Tools in Research and Teaching - A Case Study of Biomedical Data Intelligence 03/21/2023  
Class Name: Training Course  
Life Science Library, Academia Sinica
- (18) “The Role of complexity science and deep learning techniques in medical image research: the opportunity and the challenge” 12/2022  
Class Name: Biostatistics  
Department of Nursing, Meiho University
- (19) “Artificial Intelligence in Finance” (2 credits) 09/2022-02/2023  
Affiliation: Adjunct Assistant Professor, Department of Finance, Shih-Hsin University
- (20) “Statistics for everyone”(2 credits) 09/2022-02/2023  
Affiliation: Adjunct Assistant Professor, Center for General Education, Shih-Hsin University
- (21) “生醫資料智慧化－致力未來精準、與智慧醫療應用” 04/07/2022  
Class Name: AI Special Talk  
Taiwan Artificial Intelligence Association
- (22) “Basic Statistics, Regression Analysis and Nonparametric Testing” 01/27/2022 – 03/10/2022  
Class Name: Statistical Science  
Immunwork, National Biotechnology Research Park
- (23) “Machine Learning and Deep Learning” 12/29/2021, 01/05/2022  
Class Name: Data Science  
International College of Innovation, National Cheng-chi University
- (24) “Introduction of Machine Learning and Deep Learning” 12/29/2021, 01/05/2022  
Class Name: Data Science  
International College of Innovation, National Cheng-chi University
- (25) “The Role of complexity science and deep learning techniques in medical image research: the opportunity and the challenge” 11/22/2021  
Class Name: Perspective in exploring complicated data  
Department of Applied Mathematical Sciences, National Sun Yat-sen University
- (26) “Medical Information System” 04/20/2021  
Class Name: AI for Medical Image Analysis  
Institute of Applied Mathematical Sciences, National Taiwan University

- (27) "Development of Smart Medicine" 03/05/2021  
 Class Name: Smart Healthcare and Community Practice  
 Department of Biomedical Science and Engineering, National Central University
- (28) "Introduction of Python and Medical Image Data" 08/2020  
 Class Name: AI for Medical Image Classification  
 Institute of Statistical Science, Academia Sinica
- (29) "Medical Image System; AI Application in Medical Imaging Workshops:  
 Image Recognition, Tumor Identification Segmentation" 10/2019, 11/2018 – 04/2019  
 Ministry of Health and Welfare, National Health Insurance Administration of Taiwan
- (30) "Introduction of Neuroinformatics" 10/2019  
 Class Name: Neuroinformatics/ Institute of Brain Sciences, NYMU
- (31) "Nonlinear Analysis-Fractal and Entropy Analysis" 10/2019  
 Class Name: Brain and Physiologic Signal Analysis  
 Institute of Brain Sciences, NYMU
- (32) "MR & CT Image: Data Format/ Data & Preprocessing" 03/2019 – 04/2019  
 Class Name: Artificial Intelligence for Clinical Data Analytics  
 Inst' of Applied Mathematics, NTU
- (33) "Nonlinear Analysis" 04/2018 – 05/2018  
 Class Name: Integrative Sleep Medicine  
 Institute of Brain Sciences, NYMU
- (34) "Introduction of Brain Imaging" 05/2018 – 06/2018  
 Class Name: AI for Medical Image Analysis  
 Institute of Applied Mathematics, NTU
- (35) "Psychiatry and Medical Image" 05/2018  
 Class Name: AI for Medical Image Analysis  
 Institute of Applied Mathematics, NTU

## ACADEMIC PUBLICATION

### Journal Paper

- 2024, Yang HC, Kwok PY, Li LH, ...**Lee YJ**<sup>1</sup>...WU JY, The Taiwan Precision Medicine Initiative: A Cohort for Large-Scale Studies. *bioRxiv* 2024.10.14.616932; doi: <https://doi.org/10.1101/2024.10.14.616932>
- 2024, Yen TJ, Yang CT, **Lee YJ**, Chen CC, Yang HC. Fatty Liver Classification via Risk-controlled Neural Networks Trained on Grouped Ultrasound Image Data. *Scientific Report*, 14(1), 7345. <https://doi.org/10.1038/s41598-024-57386-3>
- 2023, Zhu JD, Tsai SJ, Lin CP, **Lee YJ** & Yang AC\*. Predicting aging trajectories of decline in brain volume, cortical thickness and fractional anisotropy in schizophrenia. *Schizophrenia*, 9 (1)



4. 2022, Yen-Chen Chen, **Yi-Ju Lee**, Chi-chi Chang, Su-Yun Huang, Albert C. Yang, Shih-Jen Tsai, Weichung Wang\*. Computing Extreme Tail Probabilities of Multiple t-tests and a GPU-accelerated Genome-wide Association Study. Submitted.
5. 2021, **Lee YJ**, Huang SY, Lin CP, Tsai SJ, & Yang AC. Alteration of power law scaling of spontaneous brain activity in schizophrenia. *Schizophrenia Research*, 238, 10-19.
6. 2024, Predictive Modeling of Lesion Outcomes in Age-Related Macular Degeneration Patients Receiving Triple Intravitreal Injections Using Optical Coherence Tomography Imaging and Deep Learning Algorithms (Manuscript in preparation)
7. 2024, The Investigation of the Predictability of Multimodal Image Report Data Using XGBoost for Self-Reported Disease in Taiwan Biobank (Manuscript in preparation)
8. **Lee YJ**. Emerging Paradigms in AI Literacy for Sustainable Healthcare: Perspectives on AI Application in Medical Research in Taiwan (submitting to *Symposium Issue*)
9. **Lee YJ**. Journey into the Mysteries of the Mind: Understanding Schizophrenia and How Patterns in the Brain Can Change (submitting to *Frontiers for Young Minds*)

## Technical Reports

1. 2025, **Lee YJ**. The Future Vision of Precision Medicine: A Philosophy of Science Perspective on AI Integration, Cultural Trust, and Sustainable Development. *Academic Medicine Course in Precision Medicine, OXCEP, University of Oxford*. Argumentative Essay.  
[https://drive.google.com/file/d/1eQvchBZlC0955b\\_Z9v2tCnQ4GcsIPiEc/view?usp=sharing](https://drive.google.com/file/d/1eQvchBZlC0955b_Z9v2tCnQ4GcsIPiEc/view?usp=sharing)
2. 2022, **Lee YJ**.
3. 2020, **Lee YJ**. Understanding the Role of Brain Signal Complexity in Schizophrenia: A Resting-State fMRI Investigation. *Taiwan International Graduate Program in Interdisciplinary Neuroscience, National Yang-Ming University and Academia Sinica*. Doctoral Dissertation.
4. 2020, **Lee YJ**, Huang SY, Lin CP, Tsai SJ & Yang AC\*. Alteration of Power Law Scaling of Spontaneous Brain Activity in Schizophrenia. *Schizophrenia Research*, Under Review. Also available at bioRxiv doi: <https://doi.org/10.1101/2020.02.13.946657>
5. 2020, Chen CY, **Lee YJ**, Huang SY, Tsai SJ, Yang AC & Wang W\*. A High-Speed Algorithm for Genome-Wide Association Studies on Multi-GPU. Manuscript in Preparation.
6. 2015, **Lee YJ**, From Study Hard to Study Smart – Student Engagement in Higher Education in Taiwan. *Institute of Learning Sciences, National Tsing Hua University*. Thesis for Master of Science.

## Conference Presentation (Oral and Poster Presentation)

1. 2025 **Lee YJ**, Structural Equation Modeling of ADNI Latent Structures, Poster Presentation, 2025 *The Organization for Human Brain Mapping (OHBM) Annual Meeting*, **Poster Presentation**, Brisbane,

Australia

2. 2025 Lee YJ, **Lee YJ**, Seeing organic: The discourse of Taiwan's agricultural policy propaganda, **Poster Presentation**, The Public Communication of Science and Technology Conference 2025, Aberdeen, Scotland
3. 2025 **Lee YJ**, Tsai SL, Chen CW, Chu SK, Yang CT, Yang, JH, Liang YJ, Lin YC, Hsieh HN, Hu SY, Yen TJ, Chen CH, Yang HC, Predictive Modeling of Self-reported Diseases Using Medical Image Reports and Multi-omic Data: A XGBoost Study of Taiwan Biobank, Poster Presentation and Lightning Talk, *ISM-ISSAS-ISI 2025 Joint Meeting*, Tachikawa, Japan
4. 2025 Thiyam J, Liao CH, Chuang JR, **Lee YJ**, Hsiao Z, Chen CH, Yang HC, Progressive Refinement Workflow: A Novel LLM-based Framework for Enhanced SNOMED Coding in Pathology Reports, **Poster Presentation**, *Poster Competition Institute of Statistical Science*, Academia Sinica
5. 2024 **Lee YJ**, Insights from Bench to Nation: Experiences with Biomedical Databases at Multiple Scales, *Psychology forum: many faces of open science*, **Invited Oral Presentation & Panel**, Tainan, Taiwan.
6. 2024 Ch'ng ZL, **Lee YJ**, Yang HC, Detecting Hyperlipidemia from Abdominal Ultrasonography and Bone Density Scan with Deep Learning, *TIGP Summer Interns Research Exhibition*, **Poster Presentation**, Taipei, Taiwan
7. 2024 Yang YS, **Lee YJ**, Chen CH, Yang HC, Hypertension Identification using Abdominal Ultrasound of Taiwan Biobank: a Preliminary Study, *Summer Internship Program of Institute of Statistical Science*, **Poster Presentation**, Taipei, Taiwan
8. 2024 **Lee YJ**, Decoding Neuronal Dynamics: Chaotic Deep Learning for Major Depressive Disorder Classification, *2024 The Organization for Human Brain Mapping (OHBM) Annual Meeting*, **Poster Presentation**, Seoul, Korea
9. 2024 Josephine N, **Lee YJ**, Chang PC, Chen HH, Wang KC. SG-RAD: A Visual Analytics Approach in Subgroup and Risk Factors Discovery and Analysis, *Pacific Visualization (PacificVis) 2024*, ShortNote, **Poster Presentation**, Tokyo, Japan
10. 2024 **Lee YJ (Invited Talk)** Towards Intelligent Wellness: Advancing Healthcare through AI-Driven Medical Image Analysis with a Statistical Learning Approach. *Business Intelligence Workshop and the 2024 Taiwan Smart Technology and Annual Applied Statistics Academic Conference*, **Oral Presentation**, Taichung, Taiwan.
11. 2023 **Lee YJ** Chaotic-Based Deep Learning for Major Depressive Disorder: Leveraging Neuronal Dynamics in Classification. *2023 ISI-ISM-ISSAS Joint Conference*, **Oral Presentation**, Kolkata, India
12. 2023 Lin PJ, **Lee YJ**, Hsiung CN & Hsu CH Integrating Taiwan Biobank and National Health Insurance Big Data: A Preliminary Exploration of Constructing Colorectal Cancer Prediction Model using XGBoost. *The 50th National Military Medical Academic Symposium*, **Poster Presentation**, Taipei, Taiwan

13. 2023 **Lee YJ** Emerging Paradigms in AI Literacy for Sustainable Healthcare: Perspectives on AI Application in Medical Research in Taiwan. *2023 International Conference on AI for a Sustainable Society*, **Oral Presentation**, Taipei, Taiwan
14. 2023 **Lee YJ (Invited Talk)** Telehealth as a tool for open data research and sharing. *2023 The Organization for Human Brain Mapping (OHBM) Annual Meeting*, **Poster Presentation**, Montreal, Canada
15. 2023 **Lee YJ** A Chaotic-based Deep Learning Model for Parkinson's Disease Identification-using Brain Dynamics as Features. *2023 The Organization for Human Brain Mapping (OHBM) Annual Meeting*, **Poster Presentation**, Montreal, Canada
16. 2023 **Lee YJ** Developing AI Literacy for Sustainable Healthcare- Observations of AI in Medical Research in Taiwan. *The 18<sup>th</sup> International Symposium on Healthcare Information Management*, **Oral Presentation**. Hualian, Taiwan
17. 2023 **Lee YJ** A Chaotic-based Deep Learning Model for Parkinson's Disease Identification. *2023 ISI-ISM-ISSAS Joint Conference*, **Oral and Poster**, Taipei, Taiwan
18. 2022 **Lee YJ (Invited Talk)** Combining measures of signal complexity and deep learning in medical images for neurodegenerative disease screening, *The Asian Regional Section of the International Association for Statistical Computing*, Virtual Meeting
19. 2022 **Lee YJ (Invited Talk)** Chaotic-based Deep Learning Approach for Identifying Nonalcoholic Fatter Livers with Ultrasound Images, *The Workshop on Robust Statistical Inference for High Dimensional Data and Deep Models*, Institute of Statistical Science, Academia Sinica, Taipei, Taiwan
20. 2022 **Lee YJ (Invited Talk)** Two Weeks in the Most Dangerous Place to which a Young Man Can Be Sent – Academic Medicine @ University of Oxford, *Postdoc Seminar*, Institute of Statistical Science, Academia Sinica, Taipei, Taiwan
21. 2022 **Lee YJ (Invited Talk)** GPU-Facilitated Deep Learning Approach in Medical Images Analysis. *OpenACC and Hackathons Asia-Pacific Summit*, Virtual Meeting
22. 2022 **Lee YJ**, Kao CH, Chen CH, Visualizing Latent Structures of ADNI Dataset with GAP-guided Clusters in Structural Equation Modelling (SEM), *Poster Presentation*, *2022 Data Science, Statistics & Visualization (DSSV)*, **Poster Presentation**, Tainan, Taiwan
23. 2022 **Lee YJ**, Yang HC, Chen CH, Feature Extraction with Signal Complexity in VGG models for Identifying Alzheimer's Disease: An Exploratory Study, *Poster Presentation*, *2022 The Organization for Human Brain Mapping (OHBM) Annual Meeting*, **Poster Presentation**, Virtual Meeting
24. 2022 **Lee YJ (Invited Talk)** Deep Learning-Based Segmentation for Pneumothorax Identification in Chest Radiograph: Application of Tensor Dimensionality Reduction Method, *The 11th Conference of the IASC-ARS*, Kyoto, Japan, Virtual Meeting

25. 2022 **Lee YJ** & Chen CH. Combining Measures of Signal Complexity and Deep Learning for Identifying Alzheimer's Disease: An Exploratory Study. **Oral and Poster Presentation**, Institute of Statistical Sciences of Academia Sinica , Taipei, Taiwan (Winner)
26. 2021 **Lee YJ**, Huang SY, Chen CH. The Application of Tensor Dimensionality Reduction Method in VGGs for Biological Sex Classification with Brain Structural Images,**Oral Presentation**, 2021 統計學術研討會暨台、日、韓國際統計學術研討會, Taipei, Taiwan
27. 2021 **Lee YJ**, Toshinari M, Huang SY. Tensor Dimensionality Reduction in Deep Learning-Based Segmentation: Identify Pneumothorax in Chest X-Rays, Oral Presentation, 第30屆南區統計研討會暨2021中華機率統計學會年會及學術研討會, **Oral Presentation**, Kaohsiung, Taiwan
28. 2021 Chen CH, Yang HC, **Lee YJ**. 我所接觸的精準醫療到智慧醫療工作,第30屆南區統計研討會暨2021中華機率統計學會年會及學術研討會, Kaohsiung, Taiwan
29. 2021 Lee YJ & **Lee YJ**. Believe It or Not? The Role of Perception of Different Information Source in Weather Forecast Credibility - A Preliminary Study on College Students, Oral Presentation, 2021 *Conference on Weather Analysis and Forecasting*, **Oral Presentation**, Taipei, Taiwan
30. 2021 **Lee YJ**, Toshinari M, Huang SY. The Tensor Dimensionality Reduction Method in Deep Learning Based Sex Classification Using Brain MRI, **Poster Presentation**, 2021 *The Organization for Human Brain Mapping (OHBM) Annual Meeting*, Virtual Meeting
31. 2021 **Lee YJ**, Toshinari M, Huang SY. Tensor Dimensionality Reduction in Identifying Pneumothorax in Chest X-Rays, **Oral and Poster Presentation**, Institute of Statistical Sciences of Academia Sinica , Taipei, Taiwan (1<sup>st</sup> Award)
32. 2020, **Lee YJ**, Toshinari M, Huang SY. Tensor Dimensionality Reduction in Deep Learning-Based Segmentation: Identify Pneumothorax in Chest X-Rays, **Poster Presentation**, *The 3rd Annual Meeting of Taiwan Society of Engineering Technology and Practical Medicine-2020 Artificial Intelligence and Application in Medicine Conference*, Taipei, Taiwan (Poster Award)
33. 2020, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. Altered Functional Complexity Associated with Structural Features in Schizophrenic Brain, **Oral Presentation**, *the 5<sup>th</sup> International Conference on Complexity, Future Information System and Risk (COMPLEXIS 2020)*, Prague, Czech Republic
34. 2020, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. The Relationship between Brain Structural Volume and Brain Signal Complexity in Schizophrenia, **Poster Presentation**, 2020 *The Organization for Human Brain Mapping (OHBM) Annual Meeting*, Montreal, Canada
35. 2020, **Lee YJ**, Huang SY, Tsai SJ, Yang AC. Alteration of Power Law Scaling of Spontaneous Brain Activity in Schizophrenia. **Oral Presentation**, 2020 *Complex Systems Symposium*, Taiwan
36. 2020, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. Alteration of Power Law Scaling of Spontaneous Brain Activity in Schizophrenia. **Poster Presentation**, *the 1<sup>st</sup> Asia-Pacific Computational and Cognitive*

37. 2020, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. Understanding the Role of Brain Signal Complexity in Schizophrenia, **Oral Presentation**, *8th Interdisciplinary Neurosciences Retreat of TIGP*, New Taipei, Taiwan.
38. 2019, **Lee YJ**, Tsai SJ & Yang AC\*. Power Law Scaling in Schizophrenia: A Resting-state fMRI Investigation. *Schizophrenia Bulletin* 45, S335-S336. (SCI)
39. 2019, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. Power Law Scaling in Schizophrenia: A Resting-State fMRI Investigation. **Poster Presentation**, *2019 Congress of the Schizophrenia International Research Society*. Florida, USA
40. 2019, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. The Complexity of Schizophrenic Brain: Power Law Scaling in Resting-State fMRI Data, **Oral and Poster Presentation**, Indian Statistical Institute, Institute of Statistical Mathematics of Japan, Institute of Statistical Sciences of Academia Sinica, (*ISI-ISM-ISSAS*) *Joint Conference*, Taipei, Taiwan
41. 2019, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. Complex Neuronal Dynamics of Healthy Aging: A Resting-State fMRI Investigation, **Oral Presentation**, *The 10th Cross-Strait Conference on Statistical Physics*, Taipei, Taiwan
42. 2019, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. Effects of Healthy Aging on Complex Neuronal Dynamics: A Resting-State fMRI Investigation, **Poster Presentation**, *NYMU Annual Academic Seminar*. Taipei, Taiwan
43. 2019, **Lee YJ**, Huang SY, Tsai SJ, Yang AC\*. The Complexity of Schizophrenic Brain: Power Law Scaling in Resting-State fMRI Data, **Poster Presentation**, *The 7th Interdisciplinary Neurosciences Retreat of TIGP*, Tainan, Taiwan.
44. 2015, **Lee YJ**, Huang LL\*. Student Engagement as Mediator Factor of Effort Beliefs and Learning Results- a Study of Higher Education in Taiwan, **Poster Presentation**, *The 9th International Conference for Chinese Psychologists*, Shanghai, China
45. 2015, **Lee YJ**, Huang LL\*. The Mediating Effect of Student Engagement on Effort Beliefs and Learning Results of Bachelor Engineering Students, **Oral Presentation**, *The 4th Engineering and Technology Education Conference*, Taipei, Taiwan
46. 2014, **Lee YJ**, Huang LL\*. Student Engagements and Learning Results of Taiwan High Education Students, **Oral Presentation**, *2014 International Conference on Educational Innovation: Curriculum, Instruction, and Industry-Academy Cooperation*, Hsinchu, Taiwan
47. 2014, **Lee YJ**, Huang LL\*. Learning Hard v. s. Learning Smart – The Path Analysis of Student Engagements in Taiwan Higher Education. **Oral Presentation** of educational independent study, *The 2014 International Congress of Psychology and the 53th Annual Conference of Taiwan Psychological*

48. 2014, **Lee YJ**, Huang LL\*. Student Engagement in Taiwan Higher Education, **Oral Presentation**, *The 3<sup>rd</sup> Cross-Strait Psychological Symposium*, Taipei, Taiwan
49. 2011, Huang GJ, Huang CT, Yo YJ, Tseng TS, Wu CH, Lan YW, Hsieh YJ, **Lee YJ**, Suen MW\*. The Influence of Anonymity and Competitiveness on Internal Group Bias and Social Loafing. **Poster Presentation**, *The 50<sup>th</sup> Annual Conference of Taiwan Psychology Association*, Taichung, Taiwan
50. 2011, Peng BS, Hsu YJ, Jia YJ, Chou YC, Chen CH, Li WJ, **Lee YJ**, Suen MW\*. The Effect of Attribute Frameworks and Expert Persuasion on Consumer Attitude- The Verification of Advertising Hierarchy Model, **Poster Presentation**, *The 50<sup>th</sup> Annual Conference of Taiwan Psychology Association*, Taichung, Taiwan
51. 2011, Chen JA, Chen PJ, Lai YL, Co CH, Wu PS, Hsu H, Hsieh YT, **Lee YJ**, Suen MW\*. The Effect of Source Country and Actual Quality on Perceived Product Quality of Consumer. **Poster Presentation**, *The 50<sup>th</sup> Annual Conference of Taiwan Psychology Association*, Taichung, Taiwan
52. 2010, **Lee YJ**, Li PH, Yang SH, Quo YC, Zuang FC, Kim LH, Suen MW\*. The Effect of Being Single or Not on Self-Disclosure of Friends under CMC and FTF Context – a Survey on Chung Shan Medical University Student. **Poster Presentation**, *The 49<sup>th</sup> Annual Conference of Taiwan Psychology Association*, Chiayi, Taiwan
53. 2008, Wang AL, Wu YH, Fan CH, Huang WN, Tai KN, **Lee YJ**, Ho SC, Liou YM, Ho YJ\*. Visuo-spatial Attention in MPTP-induced Animal Model of Parkinson's Disease: Testing in The 5-arm maze, **Poster Presentation**, *The 23rd Joint Annual Conference of Biomedical Science*, Taipei, Taiwan
54. 2008, Wang AL, Wu YH, Fan CH, Huang WN, Tai KN, **Lee YJ**, Ho SC, Liou YM, Ho YJ\*. Effects of D-cycloserine on MPTP-induced deficits in episodic-like memory in Wistar rats, **Poster Presentation**, *The 23rd Joint Annual Conference of Biomedical Science*, Taipei, Taiwan

## Social Media Projects

1. 2025, Celebrating 140 Years of International Statistical Institute, Article, *Statistics for a Sustainable Planet: ISI's 140-Year Legacy*. <https://communities.isi-web.org/node/576>
2. 2025, Celebrating 140 Years of International Statistical Institute, Blog, *Where Numbers Tell Their Stories True*. <https://communities.isi-web.org/node/577>
3. 2024, 3D exhibition model constructed by SketchUp for OHBM BrainArt Exhibition, teaser video. <https://www.youtube.com/watch?v=BKhm7xNEtpM>
4. 2024, 國家新創獎（學研新創）影片作品, 3-min short promotion video. <https://youtu.be/X1PmpZIJ3Vo>

## Interview by Magazine

1. 2024.06.24 「竹青新鮮力！敏捷創新視角，新竹縣攜手年輕人翻開施政新篇章」，天下雜誌。

## Policy Influence

- Policy Researcher Trainee, Digital Health Strategist 04/2025
    - Authored a [policy memo](#) titled "Silver Connections: Tech Solutions for Taiwan's Eldercare," advocating for digital healthcare transformation to bridge the technological divide for Taiwan's aging population.
    - Leveraged insights from the "Causes and Consequences of the Digital Divide" course (ITU Academy & UNU-MERIT), where I achieved the highest score in course history, to inform strategic recommendations on digital inclusion.
  - **Advisory Member**, Youth Advisory Council of Hsinchu County, Taiwan 2023-2026
    - County Youth Representative, overseeing the government and providing regular advice and policy consultations. As a leading proposal committee member, successfully authored and submitted 19 critical proposals, with 100% of them approved for "partial adoption" or greater, significantly impacting organizational strategy, policy development, project direction.
    - Demonstrated exceptional proposal development, cross-functional coordination, and influential communication skills, ensuring proposals met diverse stakeholder needs and were successfully implemented.
- (1) Request the establishment of standards and procedures for the Youth Advisory Committee's work and related proposals. (建請設立青年諮詢委員工作相關標準流程及相關提案)
  - (2) Request confirmation of the content and layout of the county government's official website. (建請確認縣政府官方網站內容及排版)
  - (3) Request the Department of Industrial Development to plan distinctive facilities for the development of the AI Smart Park. (建請產發處規劃 AI 智慧園區公園發展特色設施)
  - (4) Request the promotion of proposals related to the integration and value addition of data in the "Hsinchu County Spatial Information Intelligence Cloud." (建請促進「新竹縣圖資智慧雲」資料整合與增值相關提案)
  - (5) Request the promotion of proposals related to the enforcement of sound photography technology for civilian adoption by individuals and businesses. (建請推動聲音照相科技執法民間個人及企業認養相關提案)
  - (6) Request the drafting of a establishment for the Hsinchu County Government's Biological Database. (建請研擬新竹縣政府生物資料庫草案)
  - (7) Propose to establish "Hsinchu Youth Consultants Network" as a communication channel for past and present youth advisory council members, for discussion. (建請設立「新竹青諮友」為歷屆青年諮詢委員溝通管道，提請討論。)
  - (8) Propose to implement visits to various county government departments and organize delegation visits for youth advisory council members, for discussion. (建請落實青諮委於縣府各局處參訪及組團拜會，提請討論。)

- (9) Propose to maintain the quality of sidewalks on important roads in Zhudong Township, for discussion. (建請維護竹東鎮重要道路人行道品質，提請討論。)
- (10) Propose to hold a global youth forum on International Youth Day, for discussion. (建請於國際青年日舉辦全球青年論壇，提請討論。)
- (11) Propose to enhance the knowledge and skills of counseling and psychology professionals in caring for the physical and mental health of people with disabilities. (建請提升諮商及心理相關專業人員對於身心障礙者身心照護知能培養)
- (12) Student counseling-related mechanism - Propose to strengthen the allocation of mental health resources and establish an appointment system for youth mental health support programs. (學生輔導相關機制—建請加強心理健康資源分配及設置年輕族群心理健康支持方案預約系統)
- (13) Student counseling-related mechanism - Propose to plan mental health literacy courses for junior and senior high school students in the county. (學生輔導相關機制 —建請規畫縣內國、高中生精神醫學素養課程)
- (14) Propose to improve the efficiency of fund disbursement to elderly-friendly taxi service providers. (建請提升撥款予敬老愛心計程車業者時效)
- (15) Propose to upgrade the quality of type B large bus transportation equipment for Rapid Transit Line 8 (branch line). (建請提升快捷 8 號(支)乙型大客車運輸工具設備品質)
- (16) Propose to promote English-friendly environments in temples and folk festivals within the county. (建請推動縣內寺廟及民俗慶典為英語友善環境)
- (17) Propose to the government to take inventory of artificial intelligence development capabilities and promote AI introduction into people's livelihood applications, facilitating traditional industries' transformation and upgrading. (建請縣府盤點人工智慧發展量能並推動 AI 導入民生應用，促進傳統產業轉型升級)
- (18) Propose to the government to strengthen security key area police force deployment, increase police visibility rate and establish an objective police visibility rate assessment mechanism. (建請縣府強化治安重點區域的警力部署，提升見警率並建立客觀的見警率評估機制)
- (19) Propose to the government to construct a youth public participation digital platform, and strengthen the youth advisory committee proposal tracking mechanism, to promote youth participation in public affairs. (建請縣府建置青年公共參與數位平台，並強化青年諮詢委員會提案追蹤機制，促進青年參與公共事務)