Zhang Yifan (Jenny)

The University of Hong Kong
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Education

Ph.D. in Psychometrics *2022 - 2026 (expected)*
Faculty of Education, The University of Hong Kong
Thesis topic: Latent Variable Modeling with Bayesian Learning

M.Sc. in Data Science *2020 - 2022*
Department of Statistics & Department of Computer Science, The University of Hong Kong
Capstone project: Statistical Inference for Tensor Data

B.Sc. in Information and Computation Science *2016 - 2020*
Department of Mathematics, Northeastern University, China
Thesis: Analysis of Breast Cancer Prediction Based on Neural Network

Journal Publications

Chen, J., & **Zhang, Y.** (2024). Research Design and Model Estimation Under the Partially Confirmatory Latent Variable Modeling Framework with Multi-Univariate Bayesian Lassos. *Structural Equation Modeling: A Multidisciplinary Journal*, 32(2), 200–214. [doi]

Zhang, Y., & Chen, J. (2024). Accommodating and Extending Various Models for Special Effects Within the Generalized Partially Confirmatory Factor Analysis Framework. *Applied Psychological Measurement*, 48(4-5), 208-229. [doi]

Conference Presentations

Yifan Zhang & Jinsong Chen (2025, July). Bayesian Graphical Models for Factorial Correlation Estimation. *Presented at the 2025 International Meeting of the Psychometric Society (IMPS)*, Minneapolis, MN.

Yifan Zhang & Jinsong Chen (2025, April). A Comprehensive Comparison of Partially Confirmatory Methods in SEM. *Poster Presented at the National Council on Measurement in Education (NCME)*, Denver, CO.

Yifan Zhang & Jinsong Chen (2023, March). Accommodating and Extending Various Models for Special Effects within the Generalized Partially Confirmatory Factor Analysis Framework. *Paper Presented at the National Council on Measurement in Education (NCME)*, Chicago, IL. (Virtual)

Yifan Zhang & Jinsong Chen (2023, March). Improving Recommender System with the Partially Confirmatory Approach and Psychological Factors. *Paper Presented at the National Council on Measurement in Education (NCME)*, Chicago, IL. (Virtual)

Selected Awards

Psychometric Society Travel Award, IMPS *2025*

Honorable Mention, COMAP(MCM) *2019*

2nd Prize/3rd Prize, China Undergraduate Mathematical Contest in Modeling *2018/2017*

1st Prize/3rd Prize, NEU Mathematical Modeling Contest for College Students *2018/2017*

Academic Scholarship, Northeastern University *2017/2018/2019*

Research Project

Statistical Inference for Tensor Data *2021*
Master Capstone Project *Hong Kong, China*

- Researched spatiotemporal sequence prediction using models such as SRVP, ConvLSTM, ConvT-TLSTM, Deep RNN and PredRNN
- Conducted performance comparisons on the KTH dataset, focusing on metrics like PSNR, SSIM, and LPIPS, as well as efficiency and accuracy.

Breast Cancer Prediction Based on Neural Network *2020*
Undergraduate Thesis *Shenyang, China*

- Conducted analysis on over 27,000 genetic data, performing dimensionality reduction using signal-to-noise ratio calculations.
- Developed a predictive classification neural network (SDAE-LM-LVQ), achieving a classification accuracy of 75%, outperforming traditional models.

Artificial intelligence training camp - machine learning *2019*
Summer Camp *Shenyang, China*

- Image Classification using deep learning.
- Used Python to construct convolutional neural network

Athletic Games Information Administration System *2018*
Summer Camp *Shenyang, China*

- Used My Eclipese to design the website and realized basic functions of the interface.
- Applied SQL to design database and matched the relevant functions of the website.

Working Experience

The University of Hong Kong *January - June, 2024*
RPG Student Coordinator *Hong Kong, China*

- Serve as student representatives to the Organizing Committee of the Research Postgraduate Conference
- Organize and support academic and social activities for MPhil/PhD/EdD students

The University of Hong Kong *June - August, 2022*
Research Assistant I *Hong Kong, China*

- Enhance research methodology and psychometrics with learning-based latent variable modeling
- Methodological developments to advance educational and psychological measurement with Bayesian learning

The University of Hong Kong *June - August, 2021*
Research Assistant II *Hong Kong, China*

- Prepare comprehensive course materials, converting code and text into high-quality documents using Rmarkdown.
- Explored and implemented R tools for visualizing SEM models, enhancing interpretability and presentation of complex model structures.

Biden Consulting Company *March - November, 2019*
Campus Representative *Shenyang, China*

- Took the duties of brand and product promotion within campus.

- Administrated operate alumni association.
- Campus excellent professional manager, ranked 4/100.

Manulife Financial Centre *February, 2019*
Asset Management Intern *Hong Kong, China*

- Analyzed Asian market trends for asset planning, tracked financial service industry dynamics, collected data, and wrote business proposals for decision-making.
- Conducted portfolio analysis through real-time simulation for corporate asset management.
- Best Team Award of The 2019 Manulife GP programme.

Teaching Experience

Teaching Assistant
The University of Hong Kong

EDUR7103, Structural Equation Modeling I *Spring, 2024*

EDUR6021, Quantitative Research Methods II *Spring, 2024/Spring, 2025*

EDUR7102, Statistical and Psychometric Analysis with R *Fall, 2023*

EDUR7109, Factor Analysis *Fall, 2023*

MEDD8904, Introduction to Factor Analysis and Structural Equation Modeling *Spring, 2023*

MEDD8815, Introduction to Statistical Methods *Fall, 2022*

MLIM6025, Methods of Research and Enquiry *Spring, 2022*

Academic Services

Organizing Committee

- 2024 Research Postgraduate Conference (RPC) at HKU

Session Chair

- 2025 National Council on Measurement in Education (NCME) Annual Meeting
- 2024 Research Postgraduate Conference (RPC) at HKU

Reviewer

- 2025 National Council on Measurement in Education (NCME) Annual Meeting

Technical Skills

Programming Languages/Tools Python, R, C++, Matlab, Mplus, SPSS, HTML, LaTeX

Language Proficiencies

Mandarin Native
English Fluent