

Zhang Yifan (Jenny)

The University of Hong Kong
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Education

Ph.D. in Psychometrics

Faculty of Education

Thesis topic: Latent Variable Modeling with Bayesian Learning

2022 - 2026 (expected)

The University of Hong Kong

M.Sc. in Data Science

Department of Statistics & Department of Computer Science

Capstone project: Statistical Inference for Tensor Data

2020 - 2022

The University of Hong Kong

B.Sc. in Information and Computation Science

Department of Mathematics

Thesis: Analysis of Breast Cancer Prediction Based on Neural Network

2016 - 2020

Northeastern University, China

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]

Presentations

Yifan Zhang & Jinsong Chen (2023, March). Accommodating and extending various models for special effects within the generalized partially confirmatory factor analysis framework. Presented at the National Council on Measurement in Education (NCME), Chicago, IL. Virtual Presentation.

Yifan Zhang & Jinsong Chen (2023, March). Improving recommender system with the partially confirmatory approach and psychological factors. Presented at the National Council on Measurement in Education (NCME), Chicago, IL. Virtual Presentation.

Awards

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

Master Capstone Project

2021

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

- Preprocessed over 27,000 genetic data by identifying outliers and reducing dimensions through 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 Eclipse 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

Structural Equation Modeling I <i>Teaching Assistant</i>	<i>Spring Semester, 2024</i> <i>HKU</i>
Quantitative Research Methods II <i>Teaching Assistant</i>	<i>Spring Semester, 2025/2024</i> <i>HKU</i>
Statistical and Psychometric Analysis with R <i>Teaching Assistant</i>	<i>Fall Semester, 2023</i> <i>HKU</i>
Factor Analysis <i>Teaching Assistant</i>	<i>Fall Semester, 2023</i> <i>HKU</i>
Introduction to factor analysis and structural equation modeling <i>Teaching Assistant</i>	<i>Spring Semester, 2023</i> <i>HKU</i>
Introduction to statistical methods <i>Teaching Assistant</i>	<i>Fall Semester, 2022</i> <i>HKU</i>
Methods of research and enquiry <i>Teaching Assistant</i>	<i>Spring Semester, 2022</i> <i>HKU</i>

Technical Skills

Programming Languages/Tools	Python, R, C++, Matlab, Mplus, SPSS, HTML, L ^A T _E X
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Language Proficiencies

Mandarin	Native
English	Fluent