

# Mingze "Rico" Huang, Ph.D.

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## Employment History


- 2023 **Freelance Statistician (Data Scientist)**  
Validate statistical models' conceptual soundness, data integrity, statistical validity, and outcome analysis for a local credit union  
Build *R* and *Python* packages for automatic high-frequency trading analysis to significantly reduce the workload of analysts for Ophelia Riego Health Fund, llc.  
Lead a project of event study on the effect of supreme court decision on stock market abnormal returns by high-frequency data for Eonum Inc.
- 2016 – 2022 **Primary Instructor & Teaching Assistant @ Texas A&M University**  
ECON410: Macroeconomic Theory  
ECON459: Games & Economic Behavior  
ECEN360/STAT315: Special Topics: Computational Data Science  
ECMT460/660: Mathematical Economics  
ECMT674: Economic Forecasting  
ECON675: Capstone for Financial Economics & Financial Econometrics  
ECON330: Economic Development  
ECON612: Money, Banking & Financial Market  
ECON203: Principle of Economics  
ECON611: Foundation of Macroeconomic Theory  
ECMT461: Economic Data Analysis
- 2012 – 2014 **Data Analyst @ Bohai Property Insurance Co.Ltd.**

## Education and Professional Certifications

- 2023 **IBM Data Engineering Professional Certificate**  
**IBM Data Analyst Professional Certificate**  
**IBM Data Science Professional Certificate**
- 2016 – 2022 **Ph.D., Texas A&M University** in Econometrics & Quantitative Economics  
Dissertation Advisor: Irina Gaynanova  
Dissertation title: *Estimation of Latent Correlations between Mixed Types of Measurements with Applications in Social-Economic Research*  
**M.Sc., Texas A&M University** in Statistics (Statistical Data Science)  
Advisor: Irina Gaynanova  
Project title: *latentcor: An R Package for estimating latent correlations from mixed data types*
- 2014 – 2016 **M.Sc., Texas A&M University** in Financial Economics & Financial Econometrics  
2014 **Summer Institute, Tel Aviv University** in Middle East Studies & Entrepreneurship
- 2006 – 2012 **B.Sc. and M.Sc., Nankai University** in Economics, Risk Management & Insurance

## Peer-Review Publications and Software Development





### Journal Articles

- 1 **Mingze Huang**, C. L. Müller, and I. Gaynanova, “Latentcor: An r package for estimating latent correlations from mixed data types,” *Journal of Open Source Software*, vol. 6, no. 65, p. 3634, 2021.  URL: <https://joss.theoj.org/papers/10.21105/joss.03634>.





## Working Papers

- 1 **Mingze Huang** and I. Gaynanova, “Pca with latent correlation,” 2022.
- 2 **Mingze Huang**, C. L. Müller, and I. Gaynanova, “The efficacy of covid government response policy: Application of estimating latent correlations between serially correlated mixed data,” 2022.
- 3 A. Rogovskyy, **Mingze Huang**, and S. Crawford, “Genetic background affects mouse responses to lyme disease pathogen,” 2022.
- 4 **Mingze Huang**, C. L. Müller, and I. Gaynanova, “Latentcor is a python package for aggregated cell-type level data analysis,” 2021.

## Software Development

- 1 **Mingze Huang**, *acpc: An R Package with Shiny App for Area Classification based on Census Data*.  URL: <https://github.com/mingzehuag/acpc>.
- 2 **Mingze Huang**, C. L. Müller, and I. Gaynanova, *latentcor: A Python Package for Estimating Latent Correlations from Mixed Data Types*.  URL: <https://pypi.org/project/latentcor/>.
- 3 **Mingze Huang**, G. Yoon, C. L. Müller, and I. Gaynanova, *latentcor: Fast Computation of Latent Correlations for Mixed Data*. 2022, R package version 2.0.1.  URL: <https://CRAN.R-project.org/package=latentcor>.
- 4 G. Yoon, **Mingze Huang**, and I. Gaynanova, *mixedCCA: Sparse Canonical Correlation Analysis for High-Dimensional Mixed Data*. 2022, R package version 1.6.2.  URL: <https://CRAN.R-project.org/package=mixedCCA>.

## Skills

Languages	 Strong reading, writing and speaking competencies for English, Mandarin Chinese, Hokkien.
Coding	 Python (NumPy, SciPy, Pandas, Plotly, Keras, Joblib, Matplotlib, Seaborn, Scikit-learn, TensorFlow...), R (doparallel, ggplot2, ...), SQL, $\LaTeX$ , Unix Bash Script, Linux/Ubuntu, ...
Databases	 MySQL, SQLite.
Misc.	 Statistical Computing, Econometrics, Machine Learning, Research, and Teaching.

## Miscellaneous Experience

### Fellowship and Awards

- 2016 – 2022  **Ph.D. Teaching/Research Assistantship, Ph.D. Dissertation Fellowship, International Texas Public Education Grant**, Texas A&M University.

### Peer-Review Services

- 2021 – ····  **Journal of Open Source Software**  
 **PLOS One**

## Miscellaneous Experience (continued)

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### Professional Associations

- 📖 American Statistical Association (ASA)
- 📖 Institute of Electrical and Electronics Engineers (IEEE)

## References

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Irina Gaynanova, Ph.D. Associate Professor  
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