

# CHENYIN GAO

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## EDUCATION

<b>PhD Statistics, North Carolina State University (NCSU)</b>	Aug. 2019 – May 2024
<ul style="list-style-type: none"><li>GPA: 4.0/4.0</li><li>Research interests: survey sampling, causal inference and data integration (advised by Dr. Shu Yang)</li><li>Mu Sigma Rho, National Statistics Honor Society</li></ul>	
<b>BS Statistics, Sun Yat-sen University (SYSU)</b>	Aug. 2015 – May 2019
<ul style="list-style-type: none"><li>GPA: 3.8/4.0. Minor in Finance</li><li>China National Scholarship, Outstanding Undergraduate Dissertation Award</li></ul>	

## RESEARCH EXPERIENCE

<b>Department of Statistics, North Carolina State University</b>	Raleigh, NC
Research Project, advised by Dr. Shu Yang	Sep. 2020 - Present
<ul style="list-style-type: none"><li>Developed data integration frameworks for causal inference [1], survey sampling [3,4] and missing data analysis [2]</li><li>Focused on causal inferences with sequential treatments via tensor completion</li></ul>	
<b>Department of Biostatistics &amp; Bioinformatics, Duke University</b>	Durham, NC
Research Intern, advised by Dr. Anru Zhang	May 2021 - Aug. 2021
<ul style="list-style-type: none"><li>Developed a deep learning framework via low-rank tensor approximated convolutional neural network (CNN) [5]</li></ul>	
<b>National Natural Science Foundation of China (NSFC) Program</b>	Guangzhou, China
Research Assistant, Risk Contagion and Network Analysis	Oct. 2017 - Sep. 2018
<ul style="list-style-type: none"><li>Applied lasso-quantile regressions within the GARCH model to capture the paired time-varying tail-risk behavior</li></ul>	

## WORK EXPERIENCE

<b>Eli Lilly and Company</b>	Indianapolis, IN
Academic Research Intern	May. 2022 – Aug. 2022
<ul style="list-style-type: none"><li>Developed a data-adaptive semi-parametric efficient framework for integrating the historical controls</li><li>Sensitivity analysis for longitudinal studies with flexible machine learning techniques</li></ul>	
<b>Department of Statistics, North Carolina State University</b>	Raleigh, NC
Teaching Assistant	Aug. 2020 - Present
<ul style="list-style-type: none"><li>Assisted in one undergraduate-level course and two graduate-level statistic courses</li></ul>	
<b>GF Securities Co., Ltd.</b>	Guangzhou, China
Big Data Engineer Intern, IT Dept.	Mar. 2019 - June 2019
<ul style="list-style-type: none"><li>Optimized ETF net position by constraint nonlinear optimization factored in risk control (VaR and CVaR) featuring lightGBM and XGBoost model</li></ul>	
<b>Deloitte Enterprise Consulting (Shanghai) Co., Ltd.</b>	Guangzhou, China
Data Analyst, Risk Advisory (RA), FSI	Nov. 2017 - Feb. 2018
<ul style="list-style-type: none"><li>Participated in the overall risk management framework and engaged scenario analysis</li></ul>	

## PUBLICATIONS/PREPRINTS

- [1] S. Yang\*, C. Gao, X. Wang, and D. Zeng (2022). Elastic integrative analysis of randomized trial and real-world data for treatment heterogeneity estimation, *Journal of the Royal Statistical Society: Series B* (accepted)
- [2] C. Gao\*, K. J. Thompson, S. Yang and J. K. Kim (2022). Nearest neighbor ratio imputation with incomplete multinomial outcome in survey sampling. *Journal of the Royal Statistical Society: Series A*, DOI: 10.1111/rssa.12841
- [3] C. Gao\* and S. Yang (2022+). Pretest estimation in combining probability and non-probability samples, *submitted*
- [4] C. Gao\*, S. Yang, and J. K. Kim (2022+). Soft calibration for correcting selection bias under mixed-effects models, *in revision*
- [5] C. Gao\*, S. Yang, and A. Zhang (2022+). Self-supervised Image Denoising via Low-rank Tensor Approximated Convolutional Neural Network, *submitted*

## PRESENTATION

- Gao, C., S. Yang, Pretest estimation in combining probability and non-probability samples. *JSM (2022)*, Washington, DC
- Gao, C., P. Acharya, A. Zhang, CNN-based Single Cryo-EM Images Unsupervised Denoisers. Impact Talk presented at: *17th Annual Duke Center for AIDS Research Virtual Fall Scientific Retreat (2021)*, Durham, NC (virtual)

## SKILLS

- Software:** R, SAS, Python, PyTorch, SQL
- Language:** Chinese (native), English

- **Others:** CFA Level I ([link](#))

## AWARDS AND HONORS

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- Mu Sigma Rho, National Statistics Honor Society, NCSU, 2021 - present
- Excellent Undergraduate Dissertation, SYSU
- China National Scholarship, China (Awarded for outstanding full-time undergraduates)
- 1<sup>st</sup> Merit Scholarship, School of Mathematics, SYSU (2/72)
- 1<sup>st</sup> Prize, China Undergraduate Mathematical Contest in Modeling, CSIAM

## ACTIVITIES AND SERVICES

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- Reviewer for *AISTATS* (2022, 2023)
- Co-organizer for *BIRS (Banff International Research Station) 5-day workshop, May 22–27, 2022* “Emerging Challenges for Statistics and Data Sciences: Complex Data with Missingness, Measurement Errors, and High Dimensionality”  
<http://www.birs.ca/events/2022/5-day-workshops/22w5010>