CURRICULUM VITAE

Yinyihong Liu

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EDUCATION

2024 (Expected)	**M.Sc.**, Statistical Science, GPA: 3.833 Duke University, Durham, North Carolina Advisors: Eric B. Laber and Rebecca C. Steorts
2022	**B.Sc.**, Mathematics and Data Science, GPA: 3.902 New York University Shanghai, Shanghai, China *Magna Cum Laude*

HONORS AND AWARDS

2023	Dean's Research Award for Master's Students, Duke University
2022	Major Honors in Mathematics, NYU Shanghai (given to top mathematics major)
2022	NYU Shanghai Excellence Award (awarded to 20% of graduating class)
2018 – 2022	Dean's List, NYU Shanghai

PUBLICATIONS (Peer-reviewed and in preparation)

1. **Liu Y.**. "Airbnb Pricing Based on Statistical Machine Learning Models," *International Conference on Signal Processing and Machine Learning*, IEEE, 2021.
2. **Liu Y.**, Aleshin-Guendel S., Marchant N.G., and Steorts R.C.. "Bounded Microclustering Models for Entity Resolution." In preparation.
3. **Liu Y.**, Brooks M., Laber E.B., and Gottfredson N.C.. "Bandit Algorithms under Partially Ordered Surrogates." In preparation.
4. **Liu Y.**, Miller J., Mak S., and the JETSCAPE collaboration. "Transfer Learning for Bayesian Parameter Estimation of Hydrodynamic Simulations." In preparation.

INVITED PRESENTATION

1. "Airbnb Pricing Based on Statistical Machine Learning Models," *International Conference on Signal Processing and Machine Learning*, Stanford University (virtual), 2021.

CURRENT RESEARCH EXPERIENCE

2022 - Present **Duke University**, Research Assistant, Advisor: Rebecca C. Steorts
Developing a new Bayesian clustering model for entity resolution jointly with Dr. Serge Aleshin-Guendel (United States Census Bureau).

2023 - Present **Duke University**, Research Assistant, Advisor: Eric B. Laber
Applying bandits algorithms to estimate optimal treatment regimes, using surrogate outcomes.

2023 - Present **Duke University**, Research Project, Advisor: Simon Mak
Using Gaussian processes to model simulation outputs in physics, and quantifying uncertainties in the parameter estimation.

PAST RESEARCH EXPERIENCE

2021 - 2022 **NYU Shanghai**, Mathematics Thesis, Advisor: Wei Wu and Chenlin Gu
Investigated consistency and asymptotic normality of random forests.

2021 **NYU Shanghai**, Data Science Capstone, Advisor: Shuyang Ling
Predicted Airbnb pricing using machine learning methods.

TEACHING EXPERIENCE

2023 Summer Workshop on Bayesian Inference for Nuclear Physics
Teaching Assistant (virtual)

2019 Fall, 2020 Spring NYU Shanghai, Mathematics Department, Teaching Assistant
MATH-SHU 235 Probability & Statistics

WORK EXPERIENCE

2022 Fudan University, Department of Statistics and Data Science, Translator
Participated in translating *Causal Inference for Statistics, Social, and Biomedical Sciences: An Introduction* by Guido W. Imbens and Donald B. Rubin into Chinese.

SKILLS

Languages: R, Python (including Scikit-Learn, PyTorch, Numpy, Pandas), MATLAB, JavaScript
Other: LaTeX