

CURRICULUM VITAE

Yinyihong Liu

Duke University, Department of Statistical Science

Email: yl880@duke.edu

Webpage: <https://emily0630.github.io>

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.**, Laber, E.B., Brooks, M. "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.
- 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: L^AT_EX