YEN-CHUN LIU

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214 Old Chemistry Box 90251, Durham, NC 27708-0251

RESEARCH INTERESTS

Gaussian processes, Bayesian Optimization, Experiment Design, Reinforcement Learning, Causal Inference

EDUCATION

Ph.D. candidate in Statistics	Aug. 2022 - present
Duke University	
M.S. in Statistics	Sep. 2020 - July 2022
National Tsing Hua University (NTHU	
B.S. in Mathematics	Sep. 2015 - Jan. 2020
National Taiwan University	

SKILLS

Programming: R, Python, Matlab, C/C++ (basic) | **Technical:** SQL, Slurm, Linux, Git, AWS

EXPERIENCES

Amazon   Sep. 2024 - present
Research Scientist (Contract)   *Raleigh, NC*

- Scoped and solved a complex business problem from end-to-end, defining data requirements, developing the methodology, and delivering the final product to a partner team.
- Conducted and published research on causal inference and reinforcement learning, with findings accepted at the 2025 Amazon Consumer Science Summit.

Department of Statistical Science, Duke University   Sep. 2023 - present
Research Assistant   *Durham, NC*

- Designed optimal experimental strategies utilizing auxiliary information for improved model efficiency.
- Developed a discrete active learning algorithm using integer programming to solve path planning problems.

Institute of Statistics, National Tsing Hua University   Dec., 2020 - July, 2022
Research Assistant   *Hsinchu, Taiwan*

- Developed efficient unbiased estimators for the transformation model by leveraging external heterogeneous aggregate data.

SELECTED PUBLICATIONS

YC Liu, Simon Mak. QuIP: Experimental design for expensive simulators with many Qualitative factors via Integer Programming. *Submitted to Journal of Computational and Graphical Statistics* 2025

K. Reyes, **YC Liu**, CY Huang, R. Banerjee, T. Martin, S. Wong, J. Wolf, S. Arora, N. Shah, A. Chari, A. Chung. Salvage therapies including retreatment with BCMA-directed approaches after BCMA CAR-T relapses for multiple myeloma. *Blood Advances* . 2024

YJ Cheng, **YC Liu**, CY Tsai, CY Huang. Semiparametric estimation of the transformation model by leveraging external aggregate data in the presence of population heterogeneity. *Biometrics.* 2023