Electrical, Computer, and Systems Engineering
Rensselaer Polytechnic Institute
✉ *yanz11@rpi.edu*
Homepage: ziruiyan.github.io
in *Linkedin*

ZIRUI YAN

Education

2021–present **Rensselaer Polytechnic Institute**, Troy, NY.
- Ph.D. candidate, Department of Electrical Computer & Systems Engineering
- GPA: 4/4

2016–2020 : **University of Science and Technology of China**, Hefei, China.
- B.S., Statistics
- B.E., Computer Science and Technology

Work Experience

Internship

06.24 – 08.24 **Yahoo! Research**, Remote.
- Project: **Large Language models (LLMs)** enhanced user intention classification
- Used zero-shot prompt to generate pseudo labels with accuracy >90% (similar to fine-tuning)
- Implemented data augmentation and sampling to transfer >70% knowledge to smaller BERT models
- **Search & Recommendation science team.** Mentor: Xinyue Wang Manager: Rao Shen

05.23 – 08.23 **IBM Research**, Yorktown Heights, NY.
- Designed efficient bandit-based prompt learning algorithms for **large language models (LLMs)**
- Handled non-stationary and stochastic reward settings, and outperforming RLprompt to large scale
- Mentor: Tian Gao, Elliot Nelson, and others

Selected Publications (∗ equal contribution)

NeurIPS 2024 **Linear Causal Bandits: Unknown Graph and Soft Interventions**
Z. Yan, A. Tajer
Proc. Conference on Neural Information Processing Systems NeurIPS

ISIT 2024 **Improved Bound for Robust Causal Bandits with Linear Models**
Z. Yan, A. Mukherjee, B. Varıcıand A. Tajer
Proc. IEEE International Symposium on Information Theory

AISTATS 2024 **Nonlinear Causal Bandits: General Causal Models and Interventions**
Z. Yan, A. Tajer, D. Wei, D. Katz-Rogozhnikov and P. Sattigeri
Proc. International Conference on Artificial Intelligence and Statistics

JSAIT 2024 **Robust Causal Bandits for Linear Time-varying Models**
Z. Yan, A. Mukherjee, B. Varıcıand A. Tajer
IEEE Journal on Selected Areas in Information Theory

TON 2023 **Optimizing parameter mixing under constrained communications in parallel federated learning**
X. Liu*, **Z. Yan***, Y. Zhou, D. Wu, X. Chen, and J. H. Wang
IEEE/ACM Transactions on Networking

ICASSP 2022 **Federated multi-armed bandit via uncoordinated exploration**
Z. Yan, Q. Xiao, T. Chen and A. Tajer
Proc. IEEE International Conference on Acoustics, Speech and Signal Processing

WACV 2020 **Image denoising via K-SVD with primal-dual active set algorithm**
Q. Xiao, C. Wen, **Z. Yan**
Proc. the IEEE/CVF Winter Conference on Applications of Computer Vision