

WENXUAN BAO

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EDUCATION

University of Illinois Urbana-Champaign

Jan 2021 - Present

Ph.D. Candidate in Computer Science

· Supervisor: Prof. Jingrui He

Tsinghua University

Aug 2016 - Jun 2020

B.Eng. in Automation, Minor in Statistics

· GPA: 3.91/4.00, Graduating Summa Cum Laude (top 2%), National Scholarship (top 2%)

RESEARCH INTERESTS

- **Trustworthy federated learning:** generalization, robustness, fairness, and privacy
- **Transfer learning:** domain generalization, domain adaptation (especially *test-time adaptation*)

PUBLICATIONS & PREPRINTS

Conference

- [1] **Optimizing the Collaboration Structure in Cross-silo Federated Learning**
Wenxuan Bao, Haohan Wang, Jun Wu, Jingrui He
Proceedings of the 40th International Conference on Machine Learning (**ICML 2023**)
- [2] **Personalized Federated Learning with Parameter Propagation**
Jun Wu, Wenxuan Bao, Elizabeth Ainsworth, Jingrui He
Proceedings of the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2023**)
- [3] **Deep Grouping Model for Unified Perceptual Parsing**
Zhiheng Li, Wenxuan Bao, Jiayang Zheng, Chenliang Xu
Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR 2020**)

Journal

- [4] **Privacy-Preserving Graph Machine Learning from Data to Computation: A Survey**
Dongqi Fu*, Wenxuan Bao*, Ross Maciejewski, Hanghang Tong, Jingrui He
ACM SIGKDD Explorations Newsletter, Volume 25, Issue 1

Preprint

- [5] **BOBA: Byzantine-Robust Federated Learning with Label Skewness**
Wenxuan Bao, Jingrui He
- [6] **Understanding the Effect of Data Augmentation on Knowledge Distillation**
Ziqi Wang, Chi Han, Wenxuan Bao, Heng Ji

Tutorial

- [7] **Learning from Non-IID Data: Centralized vs. Federated Learning**
Jun Wu, Wenxuan Bao, Jingrui He
Proceedings of the 32nd International Joint Conference on Artificial Intelligence (**IJCAI 2023**)
- [8] **Learning from Non-IID Data: Centralized vs. Federated Learning**
Jun Wu, Wenxuan Bao, Jingrui He
2022 IEEE International Conference on Big Data (**IEEE BigData 2022**)

RESEARCH EXPERIENCE

University of Illinois Urbana-Champaign

Jan 2021 - Present

Research Assistant (supervised by Prof. Jingrui He)

- Project: Trustworthy federated learning, transfer learning

University of Rochester

Jul 2019 - Dec 2019

Research Internship (supervised by Prof. Chenliang Xu)

- Project: Deep grouping model for unified perceptual parsing

Tsinghua University

Jul 2018 - Jun 2019

Research Assistant (supervised by Prof. Hua Xu)

- Project: Multimodal sentiment analysis

WORKING EXPERIENCE

ByteDance Ltd. | Pangle

Jun 2020 - Dec 2020

Advertising System AI Intern

- Designed statistical models to improve the exposure of novel advertisements by 3 times.
- Optimized CVR prediction model to fasten the model calibration given limited historical data.
- Developed offline model evaluation tool to efficiently evaluate the model before deployment.

TEACHING EXPERIENCE

University of Illinois Urbana-Champaign

Jan 2023 - May 2023

Teaching Assistant of CS 412: Introduction to Data Mining, Spring 2023. Instructor: Prof. Hanghang Tong

SELECTED AWARDS

- 2023 ICML Grant Award
- 2022 IEEE BigData Tutorial Honorarium
- 2020 Outstanding Graduates (top 2%)
- 2017/2019 National Scholarship (top 2%)

SERVICE

- Reviewers of NeurIPS, ICLR, AAAI, KDD, CIKM
- Student volunteer of ICML 2023

SKILLS

- Languages: English, Chinese
- Programming languages: Python, C/C++, R, MATLAB, SQL, Shell
- Machine learning packages: PyTorch, TensorFlow, scikit-learn
- Tools: MapReduce, Git, Markdown, \LaTeX