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] **Adaptive Test-Time Personalization for Federated Learning**
Wenxuan Bao, Tianxin Wei, Haohan Wang, Jingrui He
Advances in Neural Information Processing Systems 36 (**NeurIPS 2023**)

[2] **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**)

[3] **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**)

[4] **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