

Fengyuan Yu

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SUMMARY

Fengyuan Yu is a second-year Ph.D. student in the College of Computer Science and Technology at Zhejiang University, advised by Assistant Professor Chaochao Chen. His research interests lie in *trustworthy AI*, with a particular focus on addressing privacy and ethical challenges in recommender systems and generative models through *machine unlearning* methods. Previously, he conducted research in federated representation learning. He completed his undergraduate studies in the Turing Class, Chu Kochen Honors College, Zhejiang University, and was fortunate to be advised by Professor Fan Zhang and Assistant Professor Junbo Zhao.

EDUCATION

2024.09 – present	Ph.D. student advised by Assistant Professor Chaochao Chen College of Computer Science and Technology Zhejiang University	Score: 91.03/100
2020.09 – 2024.06	Bachelor of Engineering in Computer Science and Technology Turing class, Chu Kochen Honors College Zhejiang University	GPA: 3.84/4.0

RESEARCH

Federated Representation Learning

Jul 2023 - Jun 2024

- Federated learning trains a shared model over *decentralized* data without transferring raw data; in practice, client data are often *non-IID*, which introduces significant challenges for optimization and generalization.
- For *federated unsupervised learning*, we mitigate representation collapse and align client representation spaces to obtain *uniform and unified* representations on non-IID data. Our method (FedU²) was accepted at CVPR 2024.
- We propose FOOGD, which estimates each client's probability density to recover a reliable global distribution that guides training, thereby improving both *out-of-distribution (OOD) generalization and detection* in federated settings. This work was accepted at NeurIPS 2024.

Recommender System Attribute Unlearning

Aug 2024 - Jan 2025

- Modern recommender systems commonly use Collaborative Filtering algorithms to provide personalized recommendations. However, privacy concerns regarding personalized recommendations have increased. Attribute unlearning focuses on forgetting sensitive user attributes, which are not part of the training data and cannot be unlearned through input unlearning.
- We propose PAU for single attribute unlearning. This work is accepted at ACM Web Conference 2024.
- We propose LEGO for multiple attribute unlearning. This work was accepted at ACM MM 2025.

Generative Model Unlearning

Jan 2025 - present

- With the rapid advancement of generative models, associated privacy concerns have attracted growing attention. To address this, researchers have begun adapting machine unlearning techniques from traditional classification models to generative settings.
- We've released a curated literature repository on generative model unlearning, covering model families, unlearning objectives, methodologies, and evaluation protocols.

AWARDS

Zhejiang Provincial Government Scholarship	2022-2023 Academic Year
Outstanding Student of Zhejiang Univeristy	2022-2023 Academic Year
Outstanding Graduate of Zhejiang Univeristy	2024
Outstanding Graduate Thesis of Zhejiang Univeristy	2024
Zhejiang University Second-Class Scholarship	2021-2022 Academic Year
Zhejiang University Second-Class Scholarship	2022-2023 Academic Year

PUBLICATIONS

Zhao, Ziming et al. (Feb. 2023). “ERNN: Error-resilient RNN for Encrypted Traffic Detection Towards Network-Induced Phenomena”. In: *IEEE Transactions on Dependable and Secure Computing*, pp. 1–18. DOI: [10.1109/TDSC.2023.3242134](https://doi.org/10.1109/TDSC.2023.3242134). URL: <https://ieeexplore.ieee.org/abstract/document/10036003>.

Liao, Xinting, Weiming Liu, Chaochao Chen, et al. (June 2024). “Rethinking the Representation in Federated Unsupervised Learning with Non-IID Data”. In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 22841–22850. DOI: [10.1109/CVPR52733.2024.02155](https://doi.org/10.1109/CVPR52733.2024.02155). URL: https://openaccess.thecvf.com/content/CVPR2024/html/Liao_Rethinking_the_Representation_in_Federated_Unsupervised_Learning_with_Non-IID_Data_CVPR_2024_paper.html.

Liao, Xinting, Weiming Liu, Pengyang Zhou, et al. (Dec. 2024). “FOOGD: Federated Collaboration for Both Out-of-Distribution Generalization and Detection”. In: *Proceedings of the 38th International Conference on Neural Information Processing Systems*. Vol. 37, pp. 132908–132945. DOI: [10.48550/arXiv.2410.11397](https://doi.org/10.48550/arXiv.2410.11397). URL: https://proceedings.neurips.cc/paper_files/paper/2024/hash/efd1e27afcb94addd03b9e14c8d9f78f-Abstract-Conference.html.

Zhou, Jun et al. (Nov. 2024). “Recommendations for Inactive Users: a Cross Domain Approach with Graph Neural Networks”. In: *International Journal of Machine Learning and Cybernetics*, pp. 1–15. DOI: [10.1007/s13042-024-02423-w](https://doi.org/10.1007/s13042-024-02423-w). URL: <https://doi.org/10.1007/s13042-024-02423-w>.

Feng, XiaoHua et al. (Apr. 2025). “Plug and Play: Enabling Pluggable Attribute Unlearning in Recommender Systems”. In: *Proceedings of the ACM on Web Conference 2025*, pp. 2689–2699. DOI: [10.1145/3696410.3714671](https://doi.org/10.1145/3696410.3714671). URL: <https://doi.org/10.1145/3696410.3714671>.

Feng, Xiaohua et al. (July 2025). “A Survey on Generative Model Unlearning: Fundamentals, Taxonomy, Evaluation, and Future Direction”. In: *arXiv preprint arXiv:2507.19894*. DOI: [10.48550/arXiv.2507.19894](https://doi.org/10.48550/arXiv.2507.19894). arXiv: [2507.19894](https://arxiv.org/abs/2507.19894) [cs.LG]. URL: <https://arxiv.org/abs/2507.19894>.

Zhou, Pengyang et al. (Mar. 2025). “FedGF: Enhancing Structural Knowledge via Graph Factorization for Federated Graph Learning”. In: *Proceedings of the 38th International Conference on Neural Information Processing Systems*. Vol. 37, pp. 448–456. DOI: [10.1145/3701551.3703493](https://doi.org/10.1145/3701551.3703493). URL: <https://doi.org/10.1145/3701551.3703493>.

SKILLS

English TOEFL iBT 103 (R 29, L 30, S 22, W 22); **GRE** 324 (V 154, Q 170); **CET–6** 552