

Xiaohui Chen

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BIO I am a 3rd-year Ph.D. candidate at Tufts University, advised by Prof. Li-Ping Liu. My research interest lies in general machine learning, with an emphasis on generative modeling, variational inference, graph learning, and large language models. Before this, I was interested in domain adaptation and generalization, computer vision, and robotics.

EDUCATION

Tufts University Ph.D Candidate in Computer Science	<i>Sep. 2021 - present</i>
Tufts University M.S. in Data Science	<i>Sep. 2019 - May 2021</i>
Wuhan University of Technology B.S. in Information System	<i>Sep. 2014 - May 2018</i>

PUBLICATIONS * Co-first authorship

Conferences

1. **Chen, X.**, Wang, Y., Du, Y., Liu, L. On Normalization in Self-supervised Transformers, Conference on Neural Information Processing Systems (NeurIPS) 2023.
2. **Chen, X.**, Sun, J., Wang, T., Guo, R., Liu, L., Zhang, A. Graph-Based Model-Agnostic Data Subsampling for Recommendation Systems, Conference on Knowledge Discovery and Data Mining (SIGKDD) 2023.
3. **Chen, X.**, He, J., Han, X., Liu, L. Efficient and Degree-Guided Graph Generation via Discrete Diffusion Modeling, International Conference on Machine Learning (ICML) 2023
4. **Chen, X.***, Han, X.* , Hu, J., Ruiz, F., and Liu, L. Order Matters : Probabilistic Modeling of Node Sequence for Graph Generation, International Conference on Machine Learning (ICML) 2021.
5. **Chen, X.***, Hosseini, R.* , Panetta, K., and Sinapov, J. A Framework for Multisensory Foresight for Embodied Agents, IEEE International Conference on Robotics and Automation (ICRA) 2021.
6. **Chen, X.***, Han, X.* , and Liu, L. GAN Ensemble for Anomaly Detection, Association for the Advancement of Artificial Intelligence (AAAI) 2021.

Journals

1. Han, X., **Chen, X.**, Ruiz, F., and Liu, L. Fitting Autoregressive Graph Generative Models through Maximum Likelihood Estimation, Journal of Machine Learning Research (JMLR)
2. **Chen, X.***, Chen, X.* , Liu, L. Interpretable Node Representation with Attribute Decoding, Transactions on Machine Learning Research (TMLR)

Preprints

1. **Chen, X.**, Li, Y., Zhang, A., Liu, L. NVDiff : Graph Generation through the Diffusion of Node Vectors.

PATENTS Data subsampling for recommendation systems, US20230098656A1.

PROFESSIONAL
EXPERIENCES

- Research Scientist Intern** *May. 2023 - Nov. 2023*
Bytedance, *Bellevue, WA, United States*
Project : Multi-modal generation via discrete diffusion models (AICG).
- Research Scientist Intern** *Jun. 2022 - Sep. 2022*
Bytedance, *Bellevue, WA, United States*
Project : Data sub-sampling algorithm for recommendation system.
- Machine Learning Engineer** *Oct. 2018 - Jun. 2019*
Cobot Technology, *Wuhan, China*
Project topics : Anomaly detection, domain adaptation, object detection.
- Software Engineer Intern** *Jun. 2017 - Sep. 2017*
SuperMap Software, *Beijing, China*
Project : Dispatching module for bicycle-sharing system.

PROFESSIONAL
SERVICES

- Conference Reviewer**
- Association for the Advancement of Artificial Intelligence (AAAI)
2023, 2024
 - International Conference on Artificial Intelligence and Statistics (AISTATS)
2023, 2024
 - Conference on Neural Information Processing Systems (NeurIPS)
2023
 - International Conference on Learning Representations (ICLR)
2024

TEACHING
EXPERIENCES

- Tufts University**
- Introduction to Machine Learning, Graduate Level *Fall 2020*
 - Statistical Pattern Recognition, Graduate Level *Spring 2023*

SKILLS

Programming Languages : Python, C++, C, Shell, Matlab, C#, Java, Javascript.
Libraries & Frameworks : Pytorch, Jax, Scikit-learn, OpenCV, ROS.
Tools : Git, Latex, HPC, GDB, Vim, Docker, Valgrind, AWS.

SELECTED
COURSES

High Dimension Probability; Information Theory; Stochastic Process; Statistical Pattern Recognition; Convex Optimization; Bayesian Deep Learning; Deep Learning; Reinforcement Learning; Natural Language Processing.