Yuning You

Ph.D. Candidate at Texas A&M University
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RESEARCH INTERESTS

Machine learning on non-Euclidean data (e.g. **graphs** or hypergraphs), with fundamental understanding in theory and challenging real-world applications to **biomedicine**.

EDUCATION & PROFESSIONAL EXPERIENCES

Texas A&M University, College Station — Aug 2019 – Present
Ph.D. Candidate in Electrical Engineering
Graduate Research Assistant in Department of Electrical and Computer Engineering
Advisor: Prof. Yang Shen & (Co-Advisor) Prof. Zhangyang Wang
Research Topic: Graph Machine Learning, Computational Drug Discovery

Xi'an Jiaotong University, Xi'an — Aug 2015 – Jun 2019
Bachelor of Engineering in Information Engineering

Genentech, Inc., South San Francisco — May 2023 – Aug 2023
Early Clinical Development/AIML Intern in Genentech Research and Early Development (gRED)
Advisor: Dr. Changlin Wan & Dr. Kai Liu; Research Topic: Spatial Transcriptomics

insitro, Inc., South San Francisco — May 2022 – Aug 2022
ML Small Molecules Intern in Department of Data Science and Machine Learning
Advisor: Dr. Bowen Liu & Ralph Ma; Research Topic: Bioactivity Signatures for Small-Molecules

Amazon.com Services, Inc., Remote — Jun 2021 – Aug 2021
Applied Scientist Intern in Product Semantics Team
Advisor: Dr. Tong Zhao; Research Topic: E-Commerce Product Network Embedding

PUBLICATIONS (2000+ Citations [Google Scholar])

Preprint'24 [link]: "Correlational Lagrangian Schrödinger Bridge: Learning Dynamics with Population-Level Regularization", **Y. You**, R. Zhou, Y. Shen.

ICLR'24 [link]: "Latent 3D Graph Diffusion", **Y. You**, R. Zhou, J. Park, H. Xu, C. Tian, Z. Wang, Y. Shen, *International Conference on Learning Representations*. (31.00% Acceptance Rate)

NeurIPS'23 [link]: "Graph Mixture of Experts: Learning on Large-Scale Graphs with Explicit Diversity Modeling", H. Wang, Z. Jiang, **Y. You**, Y. Han, G. Liu, J. Srinivasa, R. Kompella, Z. Wang, *Conference on Neural Information Processing Systems*. (26.10% Acceptance Rate)

Preprint'23 [link]: "Critical Assessment of Variant Prioritization Methods for Rare Disease Diagnosis within the Rare Genomes Project", ..., **Y. You**, ..., *medRxiv*.

IEEE Data Engineering Bulletin'23 [link]: "Graph Contrastive Learning: An Odyssey towards Generalizable, Scalable and Principled Representation Learning on Graphs", Y. Han, **Y. You**, W. Zheng, S. Hoang, T. Wei, M. Hassan, T. Chen, Y. Ding, Y. Shen, Z. Wang. (Invited Article)

ICLR'23 [link]: "Graph Domain Adaptation via Theory-Grounded Spectral Regularization", **Y. You**, T. Chen, Z. Wang, Y. Shen, *International Conference on Learning Representations*. (31.80% Acceptance Rate)

MLSB@NeurIPS'22 [link]: "Does Inter-Protein Contact Prediction Benefit from Multi-Modal Data and Auxiliary Tasks?", A. Talukder, R. Yin, Y. Sun, Y. Shen, **Y. You**, *Machine Learning for Structural Biology Workshop, Conference on Neural Information Processing Systems*.

NeurIPS'22 [link]: "Augmentations in Hypergraph Contrastive Learning: Fabricated and Generative", T. Wei*, **Y. You***, T. Chen, Y. Shen, J. He, Z. Wang, *Conference on Neural Information Processing Systems.* (*Equal Contribution, 25.60% Acceptance Rate)

Bioinformatics'22 [link]: "Cross-Modality and Self-Supervised Protein Embedding for Compound-Protein Affinity and Contact Prediction", **Y. You**, Y. Shen. (impact factor 6.93, MoML'22, ECCB'22 with 17.40% Acceptance Rate, 3DSIG COSI@ISMB/ECCB'21, MLSB@NeurIPS'20)

ICLR'22 [link]: "Bayesian Modeling and Uncertainty Quantification for Learning to Optimize: What, Why, and How", **Y. You**, Y. Cao, T. Chen, Z. Wang, Y. Shen, *International Conference on Learning Representations.* (32.29% Acceptance Rate)

WSDM'22 [link]: "Bringing Your Own View: Graph Contrastive Learning without Prefabricated Data Augmentations", **Y. You**, T. Chen, Z. Wang, Y. Shen, *ACM International Conference on Web Search and Data Mining.* (20.22% Acceptance Rate)

ICML'21 Long Presentation [link]: "Graph Contrastive Learning Automated", **Y. You**, T. Chen, Y. Shen, Z. Wang, *International Conference on Machine Learning.* (3.01% Acceptance Rate)

TVT'21 [link]: "Probabilistic Constructive Interference Precoding for Imperfect CSIT", G. Lyu, **Y. You**, A. Li, X. Liao, C. Masouros, *IEEE Transactions on Vehicular Technology.* (impact factor 5.97)

KDF@AAAI'21 Oral [link]: "AR-Stock: Deep Augmented Relational Stock Prediction", T. Wei, **Y. You**, T. Chen, *Knowledge Discovery from Unstructured Data in Financial Services Workshop, Association for the Advancement of Artificial Intelligence Conference.*

NeurIPS'20 [link]: "Graph Contrastive Learning with Augmentations", **Y. You***, T. Chen*, Y. Sui, T. Chen, Z. Wang, Y. Shen, *Conference on Neural Information Processing Systems.* (*Equal Contribution, 20.09% Acceptance Rate, 1000+ Citations)

ICML'20 [link]: "When Does Self-Supervision Helps Graph Convolutional Networks?", **Y. You***, T. Chen*, Z. Wang, Y. Shen, *International Conference on Machine Learning.* (*Equal Contribution, 21.80% Acceptance Rate)

CVPR'20 [link]: "L^2-GCN: Layer-Wise and Learned Efficient Training of Graph Convolutional Networks", **Y. You***, T. Chen*, Z. Wang, Y. Shen, *IEEE/CVF Conference on Computer Vision and Pattern Recognition.* (*Equal Contribution, 22.08% Acceptance Rate)

IPAS'18 [link]: "An Optimization Approach of Compressive Sensing Recovery Using Split Quadratic Bregman Iteration with Smoothed ℓ_0 Norm", G. Yang, **Y. You**, Z. Lu, J. Yang, Y. Wang, *IEEE International Conference on Image Processing, Applications and Systems.*

HONORS & AWARDS

ECEN Quality Graduate Student Award, Texas A&M University, Department of Electrical and Computer Engineering (5 awardees in ECEN). Apr 2023

NSF Student Travel Awards, ACM International Conference on Web Search and Data Mining. Dec 2021

Chevron Scholarship, Texas A&M University, Department of Electrical and Computer Engineering. Sep 2021

Electrical and Computer Engineering PhD Merit Fellowship, Texas A&M University, Department of Electrical and Computer Engineering. Feb 2019

TALKS & SERVICES

Texas A&M University, Prof. James Cai's Group, online. Oct 2023

Genentech, Inc., Spatial Omics Journal Club, online. Aug 2023

AstraZeneca plc, AI&A Journal Club, online. Mar 2022

University of Texas at Austin, Prof. Mingyuan Zhou's Group, online. Oct 2021

Technical University of Munich, the Learning on Graphs and Geometry Reading Group (LoGaG), online. Aug 2021

ISMB/ECCB'21, COSI: Structural Bioinformatics and Computational Biophysics (3DSIG), online. [video] Jul 2021

ICML'21, Session of Semisupervised and Unsupervised Learning, online. [video] Jul 2021

Session Chair of Semisupervised and Unsupervised Learning at ICML'21.

Reviewer in Conferences of ICML'21-23, NeurIPS'21-23, ICLR'22,24, WWW'22, LoG'22, ISMB/ECCB'21,23, ACM-BCB'21,23; Journals of TPAMI'21,23, TMLR'23, TNNLS'21-23, TKDE'22, TAI'22, INS'21, PeerJ'21, NEPL'21, JCST'22, SIPN'22, INFFUS'23, JBS'23.