Yuning You

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

Modeling of non-Euclidean data with limited labels and/or distribution shifts, with theoretical understanding and real-world applications to biomolecules.

EDUCATION

Texas A&M University, College Station Aug 2019 - Present
Ph.D. Student in Electrical Engineering
Advisor: Prof. Yang Shen (Unofficial Co-Advisor: Prof. Zhangyang Wang)

Xian Jiaotong University, Xi'an Aug 2015 - Jun 2019
Bachelor of Engineering in Information Engineering

Biochemistry Course Credits
BIOL 609 Molecular Tools Biology, VIBS 689 Single-cell Data Analysis via Machine Learning, VTMI 663 Molecular Biology of Viruses at TAMU; Introduction to Chemistry: Reactions and Ratios, Introduction to Chemistry: Structures at Solutions at Coursera.

SELECTED PUBLICATIONS

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)

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)

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

PROFESSIONAL EXPERIENCES

ML Small Molecules Intern May 2022 - Aug 2022
Department of Data Science and Machine Learning, insitro, Inc., South San Francisco
Advisor: Dr. Bowen Liu & Ralph Ma
Research topic: Bioactivity signatures for small-molecules

Applied Scientist Intern Jun 2021 - Aug 2021
Product Semantics Team, Amazon.com Services, Inc., Remote
Advisor: Dr. Tong Zhao
Research topic: Fine-grained product network embedding

Graduate Research Assistant Sep 2020 - Present
Department of Electrical and Computer Engineering, Texas A&M University, College Station
Advisor: Prof. Yang Shen
Research topics: Graph self-supervised learning, computational drug discovery

Voluntary Research Assistant May 2019 - Aug 2019
Intelligence SciencE and systEm Lab (iSEE), School of Data and Computer Science, Sun Yat-Sen University, Guangzhou
Advisor: Prof. Wei-Shi Zheng
Research topics: Graph convolutional network, skeleton-based action recognition

Voluntary Research Assistant Sep 2018 - Apr 2019
State Key Laboratory for Strength and Vibration of Mechanical Structures, School of Aerospace Engineering, Xi'an Jiaotong University, Xi'an
Advisors: Dr. Gangming Lyu & Prof. Guiyan Rong
Research topics: Robust constructive interference precoding in MISO downlink transmission

Voluntary Research Assistant Jul 2018 - Aug 2018
Optical+Biomedical Engineering Laboratory (OBEL), School of Electrical, Electronic & Computer Engineering, University of Western Australia, Perth
Advisors: Dr. Karol Karnowski & Prof. Barry Cense
Research topic: Optical coherence tomography

TALKS & SERVICES

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

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 ISMB/ECCB'21,23, ACM BCB'21, ICML'21-22, NeurIPS'21-22, ICLR'22, WWW'22, LoG'22; workshops of NeurIPS'20 SSL, WWW'21 SSL, ICML'21 SSL, WWW'22 MLoG; journals of TPAMI'21, INS'21, TNNLS'21-22, PeerJ'21, NEPL'21, JCST'22, SIPN'22, TKDE'22, TAI'22, TMLR'23, INFFUS'23.

HONORS & AWARDS

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

1st Prize in Shaanxi at Contemporary Undergraduate Mathematical Contest in Modeling, China Society for Industrial and Applied Mathematics. Dec 2016

PUBLICATIONS

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, *Bioinformatics.* (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)

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.*