

# Shengyu Feng

shengyuf@andrew.cmu.edu (734) 882-8879

GHC 5515, 5000 Forbes Avenue, Pittsburgh, PA, 15213-8213

**Research Interests** I am generally interested in the research of Graph Neural Networks and Reinforcement Learning. My recent research focuses on the development of neural combinatorial optimization solvers.

**Education** **Carnegie Mellon University (CMU)** Pittsburgh, PA, U.S.  
Ph.D., Language Technology Institute: GPA: 4.00/4.00 Aug. 2022 – Present  
Advisor: Dr. Yiming Yang

**University of Illinois at Urbana-Champaign (UIUC)** Champaign, IL, U.S.  
M.S., Computer Science: GPA: 3.91/4.00 Aug. 2020 – May 2022  
Advisor: Dr. Hanghang Tong

**University of Michigan (UMich)** Ann Arbor, MI, U.S.  
B.S.E., Computer Science: GPA: 4.00/4.00 Sep. 2018 – May 2020

**Shanghai Jiao Tong University (SJTU)** Shanghai, China  
B.S., Electrical and Computer Engineering: GPA: 3.67/4.00 Sep. 2016 – Aug. 2020

**Research Internship** **Microsoft Research** Remote  
Research intern May 2022 - Aug. 2022  
Knowledge-graph enhanced news summarization

**Intel AI Lab** Remote  
Graduate technical intern May 2021 - Aug. 2021  
Dynamic scene graph generation

**Publications & Preprints** **DIFUSCO-LNS: Diffusion-Guided Large Neighbourhood Search for Integer Linear Programming**  
Shengyu Feng\*, Zhiqing Sun\* and Yiming Yang  
*Under Review*

**Learning to Branch with Offline Reinforcement Learning**  
Shengyu Feng, Yiming Yang  
*Under Review*

**Improving Graph Neural Networks over Large-Scale Heterophilic Graphs**

Shengyu Feng, Yiming Yang

*Preprint*

### **Concept Discovery for Fast Adaptation**

Shengyu Feng, Hanghang Tong

*SIAM International Conference on Data Mining (SDM), 2023*

### **Exploiting Long-Term Dependencies for Generating Dynamic Scene Graphs**

Shengyu Feng, Subarna Tripathi, Hesham Mostafa, Marcel Nassar and Somdeb Majumdar

*IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2023*

### **X-GOAL: Multiplex Graph Prototypical Contrastive Learning**

Baoyu Jing, Shengyu Feng, Yuejia Xiang, Xi Chen, Yu Chen, Hanghang Tong

*ACM International Conference on Information and Knowledge Management (CIKM), 2022*

### **Adversarial Graph Contrastive Learning with Information Regularization**

Shengyu Feng, Baoyu Jing, Yada Zhu and Hanghang Tong

*ACM Web Conference (WWW), 2022*

### **Coreference by appearance: Visually Grounded Event Coreference Resolution**

Liming Wang, Shengyu Feng, Xudong Lin, Manling Li, Shih-Fu Chang and Heng Ji

*EMNLP 2021 Workshop on Computational Models of Reference, Anaphora and Coreference (CRAC), 2021*

### **Batch Reinforcement Learning Through Continuation Method**

Yijie Guo, Shengyu Feng, Nicolas Le Roux, Ed Chi, Honglak Lee and Minmin Chen

*International Conference on Learning Representations (ICLR), 2021*

### **Memory Based Trajectory-conditioned Policies for Learning from Sparse Rewards**

Yijie Guo, Jongwook Choi, Marcin Moczulski, Shengyu Feng, Samy Bengio, Mohammad Norouzi and Honglak Lee

*Neural Information Processing Systems (NeurIPS) 2020*

Honors &  
Awards

Siebel Scholars for class 2022 (UIUC)  
University Merit Student (SJTU)

2021  
2017, 2018

	Interdisciplinary Contest in Modeling Meritorious Winner	2017
	Dean's List (UMich, SJTU)	Every semester
Teaching Experiences	<b>Teaching Assistant, UIUC</b> CS 445: Computational Photography Instructor: Derek Hoime	Spring 2021, Fall 2020
	<b>Instructional Aide, UMich</b> EECS 442: Computer Vision Instructor: Justin Johnson (Winter 2020), David Fouhey (Fall 2019)	Winter 2020, Fall 2019
Professional Services	Reviewer, <i>International Conference on Learning Representations (ICLR)</i>	2022-2024
	Reviewer, <i>Neural Information Processing Systems (NeurIPS)</i>	2021-2023
	Reviewer, <i>International Conference on Machine Learning (ICML)</i>	2022-2023
Skills	<b>Programming languages:</b> Python, C/C++, Javascript, Java, R and Matlab <b>Deep learning frameworks:</b> PyTorch, Tensorflow and Pytorch Geometric	