

## Education

2021 – **Ph.D. in Computer Science**, *Northeastern University, Boston, MA.*

Advised by Hongyang R. Zhang

2016 – 2020 **B.Eng. in Computer Science**, *Shanghai Jiao Tong University, Shanghai, China.*

Minor in Mathematics and Applied Mathematics

## Research Interests

I am interested in building principled methodologies for learning with weak supervision and developing analytic tools for graph-structured data. The research areas span transfer learning, multitask learning, data augmentation, and contrastive learning. In particular, I have been studying how to model task structures for task selection in multitask learning and how to achieve better generalization performance for fine-tuned deep neural networks.

## Publications and Preprints

### Preprints

2022 Task Modeling: Approximating Multitask Predictions for Cross-Task Transfer.

**Dongyue Li**, Huy L. Nguyen, Hongyang R. Zhang.

2022 Optimal Intervention on Weighted Networks via Edge Centrality.

**Dongyue Li**, Tina Eliassi-Rad, Hongyang R. Zhang.

### Conference Publications

2022 Robust Fine-Tuning of Deep Neural Networks with Hessian-based Generalization Guarantees.

Haotian Ju\*, **Dongyue Li**\*, Hongyang R. Zhang.

International Conference on Machine Learning (ICML), 2022.

2021 Improved Regularization and Robustness for Fine-tuning in Neural Networks.

**Dongyue Li**, Hongyang R. Zhang.

Advances in Neural Information Processing Systems (NeurIPS), 2021.

2022 DTQAtten: Leveraging Dynamic Token-based Quantization for Efficient Attention Architecture.

Tao Yang, **Dongyue Li**, Zhuoran Song, Yilong Zhao, Fangxin Liu, Zongwu Wang, Zhezhi He and Li Jiang.

Conference on Design Automation and Test in Europe (DATE), 2022.

2021 AdaptiveGCN: Efficient GCN Through Adaptively Sparsifying Graphs.

**Dongyue Li**\*, Tao Tang\*, Zhezhi He, Li Jiang.

Conference on Information and Knowledge Management (CIKM), 2021. Short paper.

2021 PIMGCN: A ReRAM-Based Processing-in-Memory Accelerator for Graph Convolutional Network.

Tao Yang, **Dongyue Li**, Yilong Zhao, Yibo Han, Zhezhi He, Li Jiang.

Design Automation Conference (DAC), 2021.

2021 ReRAM-Sharing: Fine-Grained Weight Sharing for ReRAM-Based Deep Neural Network Accelerator.

**Dongyue Li**\*, Zhuoran Song\*, Zhezhi He, Li Jiang.

International Symposium on Circuits and Systems (ISCAS), 2021.

## Workshop Papers

- 2022 Task Modeling: Approximating Multitask Predictions for Cross-Task Transfer.  
**Dongyue Li**, Huy L. Nguyen, Hongyang R. Zhang.  
NeurIPS Workshop on Distribution Shifts (DistShift), 2022.  
Previous version on ICML Workshop on Principles of Distribution Shift (PODS), 2022.
- 2022 Optimal Intervention on Weighted Networks via Edge Centrality.  
**Dongyue Li**, Tina Eliassi-Rad, Hongyang R. Zhang.  
KDD Workshop on Epidemiology meets Data Mining and Knowledge Discovery (epiDAMIK), 2022.
- 2022 Robust Fine-Tuning of Deep Neural Networks with Hessian-based Generalization Guarantees.  
Haotian Ju\*, **Dongyue Li**\*, Hongyang R. Zhang.  
ICML Workshop on Updatable Machine Learning (UpML), 2022.
- 2021 Personalized and Environment-Aware Battery Prediction for Electric Vehicles.  
**Dongyue Li**\*, Guangyu Li\*, Bo Jiang\*, Zhengping Che, Yan Liu.  
KDD Workshop on Mining and Learning from Time Series (MiLeTS), 2021.

*Remark:* Asterisk indicates equal contribution

## Work Experience

- 08/20–05/21 **Full-time Researcher**, supervised by Li Jiang.  
*Shanghai Qi Zhi Institute, Shanghai, China*  
Designed efficient machine learning algorithms for accelerating deep neural networks, including convolutional neural networks, graph neural networks, and transformers.
- 06/19–09/19 **Research Intern**, supervised by Yan Liu.  
*Didi Chuxing AI Lab, Beijing, China*  
Conducted time-series analysis on electric vehicle operating data and built interpretable machine learning methods for battery prediction with environmental and battery sensory data.

## Services

Reviewer for AISTATS 2023, WSDM 2023, WWW 2022, KDD 2022, and NeurIPS 2022.

## Skills

Python, PyTorch, Tensorflow, C++, MATLAB, Java.

## Honors and Scholarships

- 2020 Excellent Undergraduate Thesis Award from Shanghai Jiao Tong University
- 2018 Merit Student of Shanghai Jiao Tong University
- 2016-2019 Academic Excellence Scholarship of Shanghai Jiao Tong University