Tianjin Huang

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EDUCATION

Eindhoven University of Technology *August 2018 - Present*

Doctoral Candidate (Ph.D)

Department: Mathematics and Computer Science

Specialization: Deep learning, Adversarial attack, Adversarial robustness, Generalization, Graph Neural Networks, Sparse Training.

Promotors: Prof. Mykola Penchenizkiy, Dr. Vlado Menkovski, Dr. Yulong Pei

University of Chinese Academy of Sciences *September 2014 – July 2017*

Master of Science (M.Sc)

Department: Cartography and Geographic Information System

Specialization: Remote Sensing Data Processing, Lake/Glaciers Extraction, Time series Analysis

Advisor: Prof. Li Jia

Northwest University *September 2010 – July 2014*

Bachelor of Science (B.S.)

Department: Cartography and Geographic Information System, Rank: 4/31

RESEARCH INTERESTS

Deep learning, Adversarial examples, Adversarial robustness, Graph Neural Networks, Efficient learning.

AWARDS AND HONORS

Scholarship	Four-years PhD. Founding, China Scholarship Council	2017.6
Scholarship	Third-class scholarship, Northwest University, China	2013.6
Scholarship	Third-class scholarship, Northwest University, China	2012.6
Scholarship	First-class scholarship, Northwest University, China	2011.6
Honor	Excellent student award, RADI, Chinese Academy of Science	2015.12
Honor	First-class award in computer competition, Northwest University	2012.9

PUBLICATIONS

T. Huang, V. Menkovski, Y. Pei, Y. Wang, M. Pechenizkiy. "Direction-aggregated attack for transferable adversarial examples." ACM Journal on Emerging Technologies in Computing Systems (JETC) 18.3 (2022): 1-22.

T. Huang, V. Menkovski, Y. Pei, M. Pechenizkiy. "calibrated adversarial training." Asian Conference on Machine Learning (ACML). PMLR, 2021.

T. Huang, V. Menkovski, Y. Pei, M. Pechenizkiy. "On Generalization of Graph Autoencoders with Adversarial Training." Joint European Conference on Machine Learning and Knowledge Discovery in Databases(ECML). Springer, 2021.

T. Huang, Y. Pei, V. Menkovski, M. Pechenizkiy. "Hop-count based self-supervised anomaly detection on attributed networks." Joint European Conference on Machine Learning and Knowledge Discovery in Databases(ECML). Springer, 2022.

T. Huang, L. Jia, M. Menenti, J. Lu, J. Zhou, G. Hu. "A new method to estimate changes in glacier surface elevation based on polynomial fitting of sparse ICESat—GLAS footprints". Sensors,17(8), 2017.

Tianjin Huang, Tianlong Chen, Meng Fang, Vlado Menkovski, Jiaxu Zhao, Lu Yin, Yulong Pei, Decebal Constantin Mocanu, Zhangyang Wang, Mykola Pechenizkiy, Shiwei Liu. "You Can Have Better Graph Neural Networks by Not Training Weights at All: Finding Untrained Graph Tickets", Under review, NIPS 2022.

Tianjin Huang, Shiwei Liu, Tianlong Chen, Meng Fang, Li Shen, Vlado Menkovski, Lu Yin, Yulong Pei, Mykola Pechenizkiy. "In-Time Refining Optimization Trajectories Toward Improved Robust Generalization", Under review, NIPS 2022.

Tianjin Huang, Vlado Menkovski, Yulong Pei, Mykola Pechenizkiy. "Bridging the performance gap between fgsm and pgd adversarial training", in arXiv,Preprint.

Y. Pei, **T. Huang,** W. Ipenburg, M. Pecheniky. "ResGCN: attention-based deep residual modeling for anomaly detection on attributed networks." Machine Learning 111.2 (2022): 519-541.

Y. Lu, V. Menkovski, M. Fang, **T. Huang,** Y. Pei, M. Pechenizkiy, DC. Mocanu, S. Liu. "Superposing Many Tickets into One: A Performance Booster for Sparse Neural Network Training." Uncertainty in Artificial Intelligence (UAI), 2022.

SERVICES

Conference Reviewer: ECML2022, ICML 2022, NIPS 2022

Journal Reviewer: IEEE Transactions on Industrial Informatics, Wireless Communications and Mobile Computing.

Teaching Assistant: Deep Learning Course (2IMM10), 2020 Spring.