

Tong Zhao

CONTACT INFORMATION	355 Fitzpatrick Hall Department of Computer Science and Engineering, College of Engineering University of Notre Dame Notre Dame, IN 46556, USA	Phone: (+1) (216) 785-3351 E-mail: tzhao2@nd.edu http://www.zhao-tong.com
RESEARCH INTERESTS	Data mining; Graph mining; Behavior modeling; Fraud detection.	
EDUCATION EXPERIENCE	University of Notre Dame, Notre Dame, IN, US • Currently a Ph.D. student in Computer Science and Engineering. • Advisor: Dr. Meng Jiang; Expected to graduate in 2022. (GPA: 3.67/4)	Aug. 2017 –
	Case Western Reserve University, Cleveland, OH, US • Bachelor of Art in Mathematics. (GPA: 3.57/4)	Aug. 2013 – May 2017
PUBLICATIONS	[W1] Tianwen Jiang, Tong Zhao , Bing Qin, Ting Liu, Nitesh V. Chawla and Meng Jiang. “Constructing Information-Lossless Biological Knowledge Graphs from Conditional Statements.” International Workshop on Data Mining in Bioinformatics (BioKDD), 2019.	
	[C3] Tianwen Jiang, Tong Zhao , Bing Qin, Ting Liu, Nitesh V. Chawla and Meng Jiang. “The Role of “Condition”: A Novel Scientific Knowledge Graph Representation and Construction Model.” ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2019.	
	[C2] Tong Zhao , Matthew Malir, and Meng Jiang. “Actionable Objective Optimization for Suspicious Behavior Detection on Large Bipartite Graphs.” IEEE International Conference on Big Data (BigData), 2018. (Oral)	
	[C1] Daheng Wang, Meng Jiang, Xueying Wang, Tong Zhao , Qingkai Zeng, and Nitesh V. Chawla. “A Project Showcase for Planning Research Work towards Publishable Success.” ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2018. (Demo)	
RESEARCH & COURSE PROJECTS	Graph neural network for anomaly detection • Seeking to combine the graph neural network with traditional unsupervised graph anomaly detection methods to jointly learn the user nodes’ representation jointly from local node information and global graph structure.	Mar. 2019 –
	Examining the vulnerability of density-based fraud detection methods • Studying adversarial review fraud versus density-based fraud detection methods such as Fraudar and CatchSync using a game-theoretical approach.	Dec. 2018 –
	Bully buyer detection using actionable optimization • Proposed and developed a matrix factorization-based optimization method for actionable bully detection. Improved F1 score by 24% over the state-of-the-art such as Fraudar and CatchSync. Published in BigData 2018 [C2].	Sept. 2017 – Apr. 2018
	CNN forward propagation acceleration using CUDA • In the course of advanced computer architecture. • Utilized technique of parallel programming to decrease the overhead of memory transfers. Reduced the running time from >10000ms to ~800ms.	Jan. 2018 – May 2018
	Adaptive detection of mobile VPN disruption • In course of graduate operating system. • Proposed a network quality based adaptive detection method for mobile VPN disconnection. Reduced average detection delay from 18.95ms to 14.10 ms.	Sept. 2018 – Dec. 2018

INTERNSHIP
EXPERIENCE

Case Western Reserve University, Cleveland, OH, US Sept. 2016 – May 2017

Peer Tutor

- Provided on-campus tutoring for undergraduate students in EECS courses.

Cassia Networks, San Jose, CA, US

Aug. 2016

Data analyst

- Analyzed signal strength data for indoor Bluetooth locations. Organized and analyzed CRM data.

Hanhai Investment, San Jose, CA, US

June 2016 – Aug. 2016

Market Assistant

- Analyzed data from the market and prospects. Arranged conferences and meet ups to promote networking and investment activity for technology start-ups.

SKILLS

Languages: Python, Matlab, Java, SQL, etc.

Systems: SciPy, PyTorch, TensorFlow, Numba, etc.

Related Courses: Complexity and Algorithms, Scalable Graph Algorithms, etc.