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 — Aug. 2017 –
- Currently a Ph.D. student in Computer Science and Engineering.
- Advisor: Dr. Meng Jiang; Expected to graduate in 2022. (GPA: 3.67/4)

Case Western Reserve University, Cleveland, OH, US — Aug. 2013 – May 2017
- Bachelor of Art in Mathematics. (GPA: 3.57/4)

CONFERENCE PUBLICATIONS

[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

Examining the vulnerability of density-based fraud detection methods — Dec. 2018 –
- Studying adversarial review fraud versus density-based fraud detection methods such as Fraudar and CatchSync using a game-theoretical approach.

Bully buyer detection using actionable optimization — Sept. 2017 – Apr. 2018
- 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].

CNN forward propagation acceleration using CUDA — Jan. 2018 – May 2018
- 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 $\sim$800ms.

Adaptive detection of mobile VPN disruption — Sept. 2018 – Dec. 2018
- 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.

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.

SKILLS

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

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

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