Yingtong Dou (Ph.D. Candidate)

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Education

Ph.D. University of Illinois at Chicago (UIC), Computer Science 2017 - present
 Advisor: Philip S. Yu
 Research Area: Graph Mining, Fraud Detection, Secure Machine Learning

B.E. Beijing Univ. of Posts and Telecoms. (BUPT), IoT Engineering
Graduated with Beijing Excellent Graduate Award
Thesis: Robust Influence Maximization Algorithm Design for OSNs

Research Experience Research Assistant BDSC Lab, UIC Advisor: Prof. Philip S. Yu

2019 - present

Thesis Research: Robust Graph Learning for Misbehavior Detection

Research Intern Snap Inc.

Summer 2021

Mentor: Dr. Neil Shah

Project: Incremental Learning with Graph Neural Networks

Research Intern Noah's Ark Research Lab

Summer 2018

Mentor: Dr. Zhenhua Dong

Project: Download Fraud Detection in Mobile App Markets

Research Assistant TDCS Lab, BUPT

2016 - 2017

Mentor: Dr. Xiaolong Deng

Project: Social Influence Measurement and Social Recommender System

Preprints

[P2] L. Sun, Y. Dou, C. Yang, J. Wang, P. S. Yu, L. He and B. Li. "Adversarial Attack and Defense on Graph Data: A Survey." *Under Review*, 2020. [arXiv:1812.10528]

[P1] Y. Dou. "A Review of Recent Advance in Online Spam Detection." *Technical Reports*, 2019. [doi:10.13140/RG.2.2.34813.00485]

Selected Publications [C7] Y. Dou, K. Shu, C. Xia, P. S. Yu and L. Sun. "User Preference-aware Fake News Detection." ACM SIGIR, 2021. [doi:10.1145/3404835.3462990]

[C4] Y. Dou, Z. Liu, L. Sun, Y. Den, H. Peng, and P. S. Yu. "Enhancing Graph Neural Network-based Fraud Detectors against Camouflaged Fraudsters." *ACM CIKM*, 2020. [doi:10.1145/3340531.3411903]

[C3] Y. Dou, G. Ma, P. S. Yu, and S. Xie. "Robust Spammer Detection by Nash Reinforcement Learning." *ACM SIGKDD*, 2020. [doi:10.1145/3394486.3403135]

[C1] Y. Dou, W. Li, Z. Liu, Z. Dong, J. Luo, and P. S. Yu. "Uncovering Download Fraud Activities in Mobile App Markets." *IEEE/ACM ASONAM*, 2019. [doi:10.1145/3341161.3345306]

Other Publications

[C9] C. Wang, Y. Dou, M. Chen, J. Chen, Z. Liu, and P. S. Yu. "Deep Fraud Detection on Non-attributed Graph." *IEEE BigData*, 2021. [arXiv:2110.01171]

[C8] J. Du, Y. Dou, C. Xia, L. Cui, J. Ma, and P. S. Yu. "Cross-lingual COVID-19 Fake News Detection." *IEEE ICDM Workshop*, 2021.[arXiv:2110.06495]

[J4] H. Peng, R. Zhang, Y. Dou, R. Yang, J. Zhang, P. S. Yu. "Reinforced Neighborhood Selection Guided Multi-Relational Graph Neural Networks." ACM

TOIS, 2021. [arXiv:2104.07886]

[C6] L. Yang, Z. Liu, Y. Dou, J. Ma and P. S. Yu. "ConsisRec: Enhancing GNN for Social Recommendation via Consistent Neighbor Aggregation." *ACM SIGIR*, 2021. [doi:10.1145/3404835.3463028]

[J3] J. Li, H. Peng, Y. Cao, Y. Dou, H. Zhang, P. S. Yu, L. He. "Higher-Order Attribute-Enhancing Heterogeneous Graph Neural Networks." *IEEE Trans. on Knowledge and Data Engineering*, 2021. [doi:10.1109/TKDE.2021.3074654]

[C5] Y. Cao, H. Peng, J. Wu, Y. Dou, J. Li, and P. S. Yu. "Knowledge-Preserving Incremental Social Event Detection via Heterogeneous GNNs." The Web Conference, 2021. [doi:10.1145/3442381.3449834]

[C2] Z. Liu, Y. Dou, P. S. Yu, Y. Den, and H. Peng. "Alleviating the Inconsistency Problem of Applying Graph Neural Network to Fraud Detection." ACM SIGIR, 2020. [doi:10.1145/3397271.3401253]

[J2] X. Deng, Y. Yu, D. Guo and Y. Dou. "Efficient CPS Model Based Online Opinion Governance Modeling and Evaluation for Emergency Accidents." Springer, GeoInformatica, 2018. [doi:10.1007/s10707-018-0319-4]

[J1] X. Deng, Y. Dou, T. Lv, N. QVH. "A Novel Centrality Cascading Based Edge Parameter Evaluation Method for Robust Influence Maximization." *IEEE Access*, 2017. [doi:10.1109/access.2017.2764750]

Skills

- Language: Chinese (Proficient), English (Advanced), Spanish (Elementary)
- Programming: Python, C, C#, Java, SQL, MATLAB, Shell, PyTorch, TensorFlow

Professional Services

- Conference Organizer: WSDM'22 Whova Chair
- Journal Reviewer: ACM TKDD, IEEE TKDE, ACM TIST, ACM TOIS, IEEE TNNLS, Springer Infor. Proc. and Mgn., Springer SNAM
- PC Member: KDD'22, SDM'22, WSDM'22, IJCAI'21,'22, ASONAM'21, AAAI'21, TrueFact@KDD'20
- External Reviewer: AAAI'22, KDD'21, WWW'21, WSDM'21, KDD'20, Big-Data'19, CIKM'19

Invited Talks

• Datafun Summit, Remote. [Slides PDF]

October 2021

• F5 Research, Remote. [Slides PDF]

May 2021

• Grab Inc., Remote

March 2021

 $\bullet\,$ AI Tech Review, Remote

August 2020

• Tencent, Shenzhen

July 2018

Teaching

- Teaching Assistant, CS341 Program Design and Implementation 21Spring
- Teaching Assistant, CS111 Program Design I

17Fall, 18Spring - 20Fall

• Teaching Assistant, CS151 Mathematics for Computing

18Fall - 19Spring

Honors and Awards

• Student Travel Awards: SIGIR'20, SIGKDD'20, CIKM'20