Yingtong Dou (Ph.D. Candidate)

Phone: +1 (312) 785-5168
Email: ydou5@uic.edu
Homepage: `https://ytongdou.com`

Google Scholar
Github

Education	**Ph.D.**	University of Illinois at Chicago (UIC), Computer Science 2017 - *present*

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 2013 - 2017
Graduated with *Beijing Excellent Graduate Award*
Thesis: *Robust Influence Maximization Algorithm Design for OSNs*

Working Experience

Research Intern **Snap Inc.** Summer 2021
Mentor: Dr. Neil Shah
Project: Incremental Learning with Graph Neural Networks

Research Intern **Noah's Ark Lab** Summer 2018
Mentor: Dr. Zhenhua Dong
Project: Download Fraud Detection in Mobile App Markets

Preprints

[P4] K. Liu*, **Y. Dou***, Y. Zhao*, et al. **"Benchmarking Node Outlier Detection on Graphs."** *Preprint*, 2022. [arXiv:2206.10071]

[P3] K. Liu*, **Y. Dou***, Y. Zhao*, et al. **"PyGOD: A Python Library for Graph Outlier Detection."** *arXiv preprint*, 2022. [arXiv:2204.12095]

[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. [doi:10.1145/3490181]

[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, Java, SQL, MATLAB, Shell, PyTorch, TensorFlow

Professional Services

- **Conference Organizer:** WWW'22 Whova Chair, WSDM'22 Whova Chair
- **Journal Editor:** Frontiers in Computer Science
- **Journal Reviewer:** ACM TKDD, IEEE TKDE, ACM TIST, ACM TOIS, IEEE TNNLS, Springer Multimedia Tools and Applications, Springer Information Processing and Management, Springer Social Network Analysis and Mining, Frontiers in Computer Science
- **Conference Reviewer:** LoG'22, NeurIPS'22, ASONAM'21,'22, CIKM'22, CySoc @ICWSM'22, KDD'22, CONSTRAINT@ACL'22, SDM'22, WSDM'22, IJCAI'21,'22, AAAI'21, TrueFact@KDD'20
- **External Reviewer:** ECML-PKDD'22, ACL'22, AAAI'22, KDD'21, WWW'21, WSDM'21, KDD'20, BigData'19, CIKM'19

Talks and Blogs

- **Mining Twitter for Social Event and Misinformation Detection.**
  CS 579 OSN Analysis, IIT, Chicago. [*Slides PDF*]   *March 2022*
- **GNN-based Fraud Detection: from Research to Application.**
  Datafun Summit, Online. [*Slides PDF*]   *October 2021*
- **Robust Fraud Detection against Adversarial Fraudsters.**
  Grab Inc. and F5 Research, Online. [*Slides PDF*]   *March & May 2021*
- **Tackling Fake Downloads in Mobile App Markets.**
  Blog Article, Medium. [*Blog Link*]   *July 2019*
- **An Introduction to Graph-based Spam Review Detection.**
  Tencent, Shenzhen. [*Slides PDF*]   *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

- Papers with Code Contributor Award　　　　　March 2022
- ACM WSDM 2022 Outstanding Service Award　　　　February 2022
- Student Travel Awards: WSDM'22, ICDM'21, SIGIR'20, SIGKDD'20, CIKM'20