Yingtong Dou (Ph.D.)

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Employment

Research Scientist, Foundational AI   Visa Research   12/2022 - Now
Supervisor: Dr. Mahashweta Das, Dr. Yiwei Cai   Foster City, CA
• Design, train, and tune **foundation models** from scratch to serve multiple use cases in payment services; Discover and validate new use cases for foundation models
• Implement and fine-tune **Transformer**- and **LLM**-based models on multimodal transactional data for advanced payment authentication and authorization
• Collaborate with team members on **data orchestration** for GenAI, scalable representation learning, and deployment of deep learning models.
• Research: foundation model for tabular/sequential data, ML trust and safety, graph mining

Research Assistant   University of Illinois Chicago   06/2019 - 10/2022
Advisor: Dr. Philip S. Yu   Chicago, IL
• Carried out research on graph-based fraud/anomaly/misinformation detection
• Initiated and contributed to several impactful open-source projects and libraries for graph-based outlier detection (PyGOD) and fraud detection (SafeGraph)
• Collaborated with Tencent, Grab Inc., F5 Networks, and Microsoft on various trust and safety research and application problems

Research Intern   Snap Inc.   06/2021 - 10/2021
Mentor: Dr. Neil Shah   Remote
• Project: probing the robustness of graph neural network under concept drift

Research Intern   Noah's Ark Lab   05/2018 - 08/2018
Mentor: Dr. Zhenhua Dong   Shenzhen, China
• Project: download fraud detection in mobile App stores

Education

Ph.D.   University of Illinois Chicago, Computer Science   2017 - 2022
           Advisor: Dr. Philip S. Yu
           Dissertation: *Robust Graph Learning for Misbehavior Detection* [PDF]

B.E.   Beijing Univ. of Posts and Telecoms., IoT Engineering   2013 - 2017
           Graduated with *Beijing Excellent Graduate Award*

B.E.   Queen Mary University of London, IoT Engineering   2013 - 2017
           Graduated with *Second Class Honours (Upper Division)*

Selected Work   #Citations=3,400. View complete publication list on [**Google Scholar**].

Y. Dou, Z. Jiang, et al. **"TransactionGPT."** *Technical Report*, 2025.
[arXiv:2511.08939]

K. Liu*, **Y. Dou***, et al. **"PyGOD: A Python Library for Graph Outlier Detection."** *JMLR*, 2024.
[JMLR:v25:23-0963]

K. Liu*, **Y. Dou***, Y. Zhao*, et al. **"BOND: Benchmarking Unsupervised Outlier Node Detection on Static Attributed Graphs."** *NeurIPS*, 2022.
[NeurIPS:v35:27021--27035]

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]

Y. Dou, Z. Liu, L. Sun, Y. Den, H. Peng, and P. S. Yu.**"Enhancing Graph Neu-

ral Network-based Fraud Detectors against Camouflaged Fraudsters." *ACM CIKM*, 2020.

[doi:10.1145/3340531.3411903]

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]

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]

Professional Services	• **Conference Organizer:** TheWebConf'22 Whova Chair, WSDM'22 Whova Chair
	• **Session Chair:** CIKM'22, KDD'22
	• **Journal Reviewer:** IEEE: TPAMI, TBD, TIFS, TKDE, TNNLS; ACM: TWEB, TKDD, TIST, TOIS; Springer: MTA, IPM, SNAM; Elsevier: KBS, OSNM, IAM, PR; Frontiers in: Computer Science, Psychology
	• **Program Committee Member:** KDD, NeurIPS, SIGIR, IJCAI, TheWebConf, AAAI, ACL, CIKM, WSDM, RecSys, ICWSM, ICDM, ECML-PKDD, SDM, LoG, ASONAM

Talks and Blogs

- **GNN-based Fraud Detection: from Research to Application.**
  Wells Fargo, Online. [*Slides PDF*]   December 2022
- **GNN-based Graph Outlier Detection: A Brief Introduction.**
  Blog Article, TigerGraph. [*Blog Link*]   September 2022
- **GNN-based Anomaly Detection: from Research to Application.**
  One Novartis Data Science Seminar, Online. [*Slides PDF*]   August 2022
- **GNNs for Financial Fraud Detection: Practices and Challenges.**
  KDD'22 MLF Workshop, Washington DC. [*Slides PDF*]   August 2022
- **Mining Twitter for Social Event and Misinformation Detection.**
  CS 579 OSN Analysis, IIT, Chicago. [*Slides PDF*]   March 2022
- **Robust Graph Learning for Misbehavior Detection.**
  Ph.D. Forum, ACM WSDM 2022, Online. [*Slides PDF*]   February 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

Honors and Awards

- ACM CIKM 2022 Best Paper Honorable Mention   October 2022
- 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