

Yingtong Dou (Ph.D.)

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Employment	Research Scientist, Foundational AI	Visa Research	12/2022 - Now
	Supervisor: Dr. Mahashweta Das Foster City, CA		
	<ul style="list-style-type: none">• 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		
	<ul style="list-style-type: none">• 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		
	<ul style="list-style-type: none">• 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		
	<ul style="list-style-type: none">• 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: <i>Robust Graph Learning for Misbehavior Detection</i> [PDF]		
	B.E.	Beijing Univ. of Posts and Telecoms., IoT Engineering	2013 - 2017
	Graduated with <i>Beijing Excellent Graduate Award</i>		
	B.E.	Queen Mary University of London, IoT Engineering	2013 - 2017
	Graduated with <i>Second Class Honours (Upper Division)</i>		
Selected Publications	#Citations=2,600. View complete publication list on [Google Scholar].		
	K. Liu*, Y. Dou*, et al. “PyGOD: A Python Library for Graph Outlier Detection.” <i>JMLR</i> , 2024. [JMLR:v25:23-0963]		
	K. Liu*, Y. Dou*, Y. Zhao*, et al. “BOND: Benchmarking Unsupervised Outlier Node Detection on Static Attributed Graphs.” <i>NeurIPS</i> , 2022. [NeurIPS:v35:27021--27035]		
	Y. Dou, K. Shu, C. Xia, P. S. Yu and L. Sun. “User Preference-aware Fake News Detection.” <i>ACM SIGIR</i> , 2021. [doi:10.1145/3404835.3462990]		
	Y. Dou, Z. Liu, L. Sun, Y. Den, H. Peng, and P. S. Yu. “Enhancing Graph Neural Network-based Fraud Detectors against Camouflaged Fraudsters.” <i>ACM CIKM</i> , 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