

# Yingtong Dou (Ph.D.)

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Employment	<b>Research Scientist, Foundational AI</b>	<b>Visa Research</b>	<b>12/2022 - Now</b>
	Supervisor: Dr. Mahashweta Das Foster City, CA		
	<ul style="list-style-type: none"><li>• Design, train, and tune <b>foundation models</b> from scratch to serve multiple use cases in payment services; discovering and validating new use cases for foundation models</li><li>• Implement and fine-tune <b>Transformer-</b> and <b>LLM</b>-based models on multi-modal transactional data for advanced payment authentication and authorization</li><li>• Collaborate with team members in GenAI for <b>data orchestration</b>, data orchestration for GenAI, <b>scalable model training</b>, and productionizing deep learning models</li><li>• Research: foundation model for tabular/sequential data, ML trust and safety, graph mining</li></ul>		
	<b>Research Assistant</b>	<b>University of Illinois Chicago</b>	<b>06/2019 - 05/2022</b>
	Advisor: Dr. Philip S. Yu Chicago, IL		
	<ul style="list-style-type: none"><li>• Carried out research on graph-based fraud/anomaly/misinformation detection</li><li>• Initiated and contributed to several impactful open-source projects and libraries for graph-based outlier detection (PyGOD) and fraud detection (SafeGraph)</li><li>• Collaborated with Tencent, Grab Inc., F5 Networks, and Microsoft on various trust and safety research and application problems</li></ul>		
	<b>Research Intern</b>	<b>Snap Inc.</b>	<b>06/2021 - 10/2021</b>
	Mentor: Dr. Neil Shah Remote		
	<ul style="list-style-type: none"><li>• Project: probing the robustness of graph neural network under concept drift</li></ul>		
	<b>Research Intern</b>	<b>Noah's Ark Lab</b>	<b>05/2018 - 08/2018</b>
	Mentor: Dr. Zhenhua Dong Shenzhen, China		
	<ul style="list-style-type: none"><li>• Project: download fraud detection in mobile App stores</li></ul>		
Education	<b>Ph.D.</b>	University of Illinois Chicago, Computer Science	2017 - 2022
		Advisor: Dr. Philip S. Yu	
		Dissertation: <i>Robust Graph Learning for Misbehavior Detection</i> [PDF]	
	<b>B.E.</b>	Beijing Univ. of Posts and Telecoms., IoT Engineering	2013 - 2017
		Graduated with <i>Beijing Excellent Graduate Award</i>	
	<b>B.E.</b>	Queen Mary University of London, IoT Engineering	2013 - 2017
		Graduated with <i>Second Class Honours (Upper Division)</i>	
Selected Publications	#Citations=2,200. View full 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