# Kai-Cheng Yang

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# Appointments Northeastern University, MA, US

Affiliations	Postdoctoral Research	Associate, Network Science Institute	Aug. 2023 –
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Affiliated Researcher, NULab for Digital Humanities and Computational Social Science

Sep. 2023 –

Affiliated Researcher, Internet Democracy Initiative

Jan. 2024 –

Affiliated Researcher, AI Literacy Lab

Jul. 2024 –

Jul. 2024 –

EDUCATION Ph.D., Informatics, Indiana University, IN, US (Dissertation [O2]) Jun. 2023

M.S., Theoretical Physics, Lanzhou University, ChinaB.S., Theoretical Physics, Lanzhou University, ChinaJun. 2014

RESEARCH Interests My research focuses on creating safe, fair, and trustworthy online information platforms by identifying how malicious actors and flawed systems distort information flow and developing effective countermeasures. My current focuses are:

- **Generative AI in online platforms**: creating fake accounts [J1, J2]; distorting information flow [R1]; combating misinformation [C1, R4]; public perception [R3]
- Classic social media bot: detection (Botometer®) [J7, C4, C5, J22]; characterization [J9, W7]; human perception [J5, J17];
- Misinformation: prevalence [J4, J13, W5]; dissemination [J25]; real-world impact [J11];

# **Past Projects**

- **US opioid epidemic**: intervention policy evaluation [J15]; high-risk patients [J6, J10, J23]; impact of COVID-19 [J14];
- Network science: embedding [J18–J20]; spreading phenomenon [R5, J24, J26];

# PUBLICATIONS GOOGLE SCHOLAR

‡: as corresponding author; †: mentored student **Journal Articles** 

- J1. Yang, K.-C.<sup>‡</sup> & Menczer, F. Anatomy of an AI-powered malicious social botnet. *Journal of Quantitative Description: Digital Media* 4 (2024).
- J2. **Yang, K.-C.**<sup>‡</sup>, Singh, D.<sup>†</sup> & Menczer, F. Characteristics and prevalence of fake social media profiles with AI-generated faces. *Journal of Online Trust and Safety* **2** (2024).
- J3. Duan, Z., Shao, A., Hu, Y., Lee, H., Liao, X., Suh, Y. J., Kim, J., Yang, K.-C., Chen, K. & Yang, S. Constructing Vec-tionaries to Extract Latent Message Features from Texts: A Case Study of Moral Appeals. Conditionally accepted by Political Analysis; preprint arXiv:2312.05990 (2023).
- J4. Pierri, F., DeVerna, M. R., Yang, K.-C., Axelrod, D., Bryden, J. & Menczer, F. One Year of COVID-19 Vaccine Misinformation on Twitter: Longitudinal Study. *Journal of Medical Internet Research* 25, e42227 (2023).

- J5. Yan, H., Yang, K.-C., Shanahan, J. & Menczer, F. Exposure to social bots amplifies perceptual biases and regulation propensity. *Scientific Reports* **13**, 20707 (2023).
- J6. Yang, K.-C., Aronson, B., Odabas, M., Ahn, Y.-Y. & Perry, B. L. Comparing measures of centrality in bipartite patient-prescriber networks: A study of drug seeking for opioid analgesics. PLoS ONE 17, e0273569 (2022).
- J7. Yang, K.-C.<sup>‡</sup>, Ferrara, E. & Menczer, F. Botometer 101: Social bot practicum for computational social scientists. *Journal of Computational Social Science* **5**, 1511–1528 (2022).
- J8. Yang, K.-C.<sup>‡</sup>, Hui, P.-M. & Menczer, F. How Twitter data sampling biases U.S. voter behavior characterizations. *PeerJ Computer Science* **8**, e1025 (2022).
- J9. Duan, Z., Li, J., Lukito, J., Yang, K.-C., Chen, F., Shah, D. V. & Yang, S. Algorithmic Agents in the Hybrid Media System: Social Bots, Selective Amplification, and Partisan News about COVID-19. *Human Communication Research* 48, 516–542 (2022).
- J10. Perry, B. L., Odabas, M., Yang, K.-C., Lee, B., Kaminski, P., Aronson, B., Ahn, Y.-Y., Oser, C. B., Freeman, P. R. & Talbert, J. C. New means, new measures: Assessing prescription drug seeking indicators over ten years of the opioid epidemic. *Addiction* 117, 195–204 (2022).
- J11. Pierri, F., Perry, B. L., DeVerna, M., Yang, K.-C., Flammini, A., Menczer, F. & Bryden, J. Online misinformation is linked to early COVID-19 vaccination hesitancy and refusal. *Scientific Reports* 12, 5966 (2022).
- J12. Yang, K.-C., Lee, B., Ahn, Y.-Y. & Perry, B. L. Use of and Comorbidities Associated With Diagnostic Codes for COVID-19 in US Health Insurance Claims. *JAMA Network Open* 4, e2124643 (2021).
- J13. Yang, K.-C.<sup>‡</sup>, Pierri, F., Hui, P.-M., Axelrod, D., Torres-Lugo, C., Bryden, J. & Menczer, F. The COVID-19 Infodemic: Twitter versus Facebook. *Big Data & Society* 8, 20539517211013861 (2021).
- J14. Lee, B., Yang, K.-C., Kaminski, P., Ahn, Y.-Y., Peng, S., Odabas, M., Gupta, S., Green, H. & Perry, B. L. Substitution of Nonpharmacologic Therapy With Opioid Prescribing for Pain During the COVID-19 Pandemic. *JAMA Network Open* 4, e2138453 (2021).
- J15. Lee, B., Zhao, W., Yang, K.-C., Ahn, Y.-Y. & Perry, B. L. Systematic Evaluation of State Policy Interventions Targeting the US Opioid Epidemic, 2007-2018. JAMA Network Open 4, e2036687 (2021).
- J16. Wen, C., Pacheco, D., Yang, K.-C. & Menczer, F. Neutral bots probe political bias on social media. *Nature Communications* **12**, 5580 (2021).
- J17. Yan, H., **Yang, K.-C.**, Menczer, F. & Shanahan, J. Asymmetrical Perceptions of Partisan Political Bots. *New Media & Society* **23**, 3016–3037 (2021).
- J18. Yoon, J., Yang, K.-C., Jung, W.-S. & Ahn, Y.-Y. Persona2vec: A Flexible Multi-role Representations Learning Framework for Graphs. *PeerJ Computer Science* 7, e174 (2021).
- J19. Zhang, Y.-J., Yang, K.-C. & Radicchi, F. Model-free hidden geometry of complex networks. *Physical Reviews E* 103, 012305 (2021).
- J20. Zhang, Y.-J., Yang, K.-C. & Radicchi, F. Systematic comparison of graph embedding methods in practical tasks. *Physical Reviews E* **104**, 044315 (2021).
- J21. Pasquetto, I. V., Swire-Thompson, B., Amazeen, M. A., Benevenuto, F., Brashier, N., Bond, R. M., Bozarth, L. C., Budak, C., Ecker, U. K., ... & Yang, K.-C. Tackling misinformation: What researchers could do with social media data. *The Harvard Kennedy School (HKS) Misinformation Review* 1 (2020).

- J22. Yang, K.-C., Varol, O., Davis, C. A., Ferrara, E., Flammini, A. & Menczer, F. Arming the public with artificial intelligence to counter social bots. *Human Behavior and Emerging Technologies*, e115 (2019).
- J23. Perry, B. L., **Yang, K.-C.**, Kaminski, P., Odabas, M., Park, J., Martel, M., Oser, C. B., Freeman, P. R., Ahn, Y.-Y. & Talbert, J. Co-prescription network reveals social dynamics of opioid doctor shopping. *PLoS ONE* **14**, e0223849 (2019).
- J24. Zhang, Y.-J., Wu, Z.-X., Holme, P. & Yang, K.-C. Advantage of Being Multicomponent and Spatial: Multipartite Viruses Colonize Structured Populations with Lower Thresholds. *Physical Reviews Letters* **123.** (Editors' Suggestion), 138101 (2019).
- J25. Shao, C., Ciampaglia, G. L., Varol, O., Yang, K.-C., Flammini, A. & Menczer, F. The spread of low-credibility content by social bots. *Nature Communications* 9, 4787 (2018).
- J26. **Yang, K.-C.**, Wu, Z.-X., Holme, P. & Nonaka, E. Expansion of cooperatively growing populations: Optimal migration rates and habitat network structures. *Physical Reviews E* **95**, 012306 (2017).

# **Peer-reviewed Conference Proceedings**

- C1. Alexander, J. H.<sup>†</sup>, Nanda, P. H., **Yang, K.-C.** & Sarvghad, A. Can GPT-4 Models Detect Misleading Visualizations? *Accepted by IEEE Visualization and Visual Analytics (VIS)* 2024; preprint arXiv:2408.12617 (2024).
- C2. Scarano, S., Vasudevan, V., Samory, M., Yang, K.-C., Yang, J. & Grabowicz, P. A. Election Polls on Social Media: Prevalence, Biases, and Voter Fraud Beliefs. *Accepted by the International AAAI Conference on Web and Social Media (ICWSM); preprint arXiv:2405.11146* (2024).
- C3. Torres-Lugo, C., Yang, K.-C. & Menczer, F. The Manufacture of Partisan Echo Chambers by Follow Train Abuse on Twitter in Proceedings of the International AAAI Conference on Web and Social Media (ICWSM) 16 (Atlanta, GA, USA, 2022), 1017–1028.
- C4. Yang, K.-C.<sup>‡</sup>, Varol, O., Hui, P.-M. & Menczer, F. Scalable and Generalizable Social Bot Detection through Data Selection in Proceedings of the AAAI Conference on Artificial Intelligence (AAAI) 34 (New York, NY, USA, 2020), 1096–1103.
- C5. Sayyadiharikandeh, M., Varol, O., Yang, K.-C., Flammini, A. & Menczer, F. Detection of Novel Social Bots by Ensembles of Specialized Classifiers in Proceedings of the 29th ACM International Conference on Information & Knowledge Management (CIKM) (Virtual, 2020), 2725–2732.

#### Peer-reviewed Workshop/Demo/Dataset/Software Papers

- W1. Feal, A., Gleason, J., Goel, P., Radford, J., Yang, K.-C., Basl, J., Meyer, M., Choffnes, D., Wilson, C. & Lazer, D. Introduction to National Internet Observatory in Proceedings of ICWSM Data Challenge Workshop (Buffalo, NY, USA, 2024).
- W2. Aiyappa, R., DeVerna, M. R., Pote, M., Tran Truong, B., Zhao, W., Axelrod, D., Pessianzadeh, A., Kachwala, Z., Kim, M., Can Seckin, O., Kim, M., Gandhi, S.†, Manikonda, A.†, Pierri, F., Menczer, F. & Yang, K.-C.‡. A Multi-Platform Collection of Social Media Posts about the 2022 U.S. Midterm Elections in Proceedings of the International AAAI Conference on Web and Social Media (ICWSM) 17 (Limassol, Cyprus, 2023), 981–989.
- W3. DeVerna, M. R., Pierri, F., Truong, B. T., Bollenbacher, J., Axelrod, D., Loynes, N., Torres-Lugo, C., Yang, K.-C., Menczer, F. & Bryden, J. CoVaxxy: A Collection of English-Language Twitter Posts About COVID-19 Vaccines in Proceedings of the International AAAI Conference on Web and Social Media (ICWSM) 15 (Virtual, 2021), 992–999.

- W4. Yang, K.-C., Aronson, B. & Ahn, Y.-Y. BiRank: Fast and Flexible Ranking on Bipartite Networks with R and Python. *Journal of Open Source Software* 5, 2315 (2020).
- W5. Yang, K.-C.<sup>‡</sup>, Torres-Lugo, C. & Menczer, F. Prevalence of Low-Credibility Information on Twitter During the COVID-19 Outbreak in Proceedings of the ICWSM International Workshop on Cyber Social Threats (CySoc) (Virtual, 2020).
- W6. Hui, P.-M., Yang, K.-C., Torres-Lugo, C. & Menczer, F. BotSlayer: DIY Real-Time Influence Campaign Detection in Proceedings of the International AAAI Conference on Web and Social Media (ICWSM) 14 (Virtual, 2020), 980–982.
- W7. Yang, K.-C.<sup>‡</sup>, Hui, P.-M. & Menczer, F. Bot Electioneering Volume: Visualizing Social Bot Activity During Elections in Companion Proceedings of The 2019 World Wide Web Conference (WWW) (San Francisco, CA, USA, 2019), 214–217.
- W8. Hui, P.-M., Yang, K.-C., Torres-Lugo, C., Monroe, Z., McCarty, M., Serrette, B., Pentchev, V. & Menczer, F. BotSlayer: real-time detection of bot amplification on Twitter. *Journal of Open Source Software* 4, 1706 (2019).

# Under Review (with manuscript to share)

- R1. **Yang, K.-C.**<sup>‡</sup> & Menczer, F. Accuracy and political bias of news source credibility ratings by large language models. *Preprint arXiv:2304.00228* (2024).
- R2. Cresci, S., **Yang, K.-C.**, Spognardi, A., Di Pietro, R., Menczer, F. & Petrocchi, M. Demystifying misconceptions in social bots research. *Preprint arXiv:2303.17251* (2024).
- R3. Yan, H., Morrow, G., Yang, K.-C. & Wihbey, J. The Origin of Public Concerns Over Al-Supercharging Misinformation in the 2024 US Presidential Election. *Preprint OSF:cpy7v* (2024).
- R4. DeVerna, M. R., Yan, H., Yang, K.-C. & Menczer, F. Fact-checking information generated by a large language model can decrease news discernment. *Preprint arXiv:2308.10800* (2023).
- R5. Xue, L.<sup>†</sup>, Yang, K.-C., Cui, P.-B. & Di, Z. Network localization strength regulates innovation diffusion with macro-level social influence. *Preprint arXiv*: 2301.00151 (2023).

# **Book Chapters**

- B1. Yang, K.-C.<sup>‡</sup>, Varol, O., Nwala, A. C., Sayyadiharikandeh, M., Ferrara, E., Flammini, A. & Menczer, F. *Forthcoming in Handbook of Computational Social Science* (ed Yasseri, T.) chap. Social Bots: Detection and Challenges (Edward Elgar Publishing Ltd, 2024).
- B2. Yan, H. & Yang, K.-C.<sup>‡</sup>. *Handbook of Critical Studies of Artificial Intelligence* (ed Lindgren, S.) chap. The landscape of social bot research: a critical appraisal. https://doi.org/10.4337/9781803928562.00073 (Edward Elgar Publishing Ltd, 2023).

# Other Works

- O1. Brown, M., Lukito, J. & Yang, K.-C. What Does CrowdTangle's Demise Signal for Data Access Under the DSA? Tech Policy Press (https://www.techpolicy.press/whatdoes-crowdtangles-demise-signal-for-data-access-under-the-dsa). 2024.
- O2. Yang, K.-C. Social Media Bots: Detection, Characterization, and Human Perception PhD thesis (Indiana University, July 2023).
- O3. Yang, K.-C. & Menczer, F. How many bots are on Twitter? The question is difficult to answer and misses the point The Conversation (https://theconversation.com/how-many-bots-are-on-twitter-the-question-is-difficult-to-answer-and-misses-the-point-183425). 2022.

# Tools Observatory on Social Media (OSoMe)

- Botometer<sup>®</sup> [J7, C4, C5, J22]: bot detection tools handling ~ 250,000 daily requests from researchers, journalists, and social media users; used by Elon Musk's team in his dispute with Twitter (via CNN, BBC, and Yahoo! Finance)
- BotAmp [J7]: bot amplification level comparison
- Midterm 2022 dashboard [W2]: US 2022 midterm elections Twitter discussion
- Hoaxy<sup>®</sup>: visualization of information spreading online with tens of thousands of users
- CoVaxxy [W3]: dashboard for COVID-19 vaccine Twitter discussion

## **Network Science**

- Persona2vec (GitHub) [J18]: multi-role representations embedding for networks
- BiRank (GitHub, PyPI, CRAN) [W4]: bipartite network PageRank

#### **Others**

- vMFD (GitHub, PyPI) [J3]: inferring moral appeals from text
- Scicolor (GitHub, Online color picker): color schemes for scientific visualization

#### GRANTS

Institute for Humane Studies Grant (\$5,000). Role: Co-PI.	2024
OpenAI Researcher Access Program (\$1,000 worth API credits). Role: PI.	2024
Northeastern University Staff development funds from Deans office (\$1,000). Role: PI.	2024
Northeastern University Internet Democracy Initiative Seed Grant (\$5,000). Role: PI.	2024
Northeastern University Lab for Text, Maps & Networks seed grant (\$500). Role: PI.	2024
Civic Health Project LLM Applications for Civic Health Grant, phase I (\$5,000). Role:	Co-PI.
	2024

Honors Awards

IU Distinguished Ph.D. Dissertation Award runner-up	2024
Selected for Rising Scholars 2023, MIT	2023
IU Informatics Luddy Graduate Research Award (\$500)	2023
IU Luddy Dean's Office Conference Travel Award (\$1,000)	2023
IU GISA Conference Travel Award (\$300)	2022
Best Reviewer Award at AAAI ICWSM 2022	2022
Selected for Future Leaders Summit 2022, University of Michigan	2022
IU Luddy Outstanding Research Award (\$500)	2021
IU School of Public Health Big Idea Challenge (\$250)	2020
IU Informatics Ph.D. Student Conference Travel Award (\$1,000)	2020
IU GISA Conference Travel Award (\$700)	2019
IU Informatics Ph.D. Student Conference Travel Award (\$1,000)	2019
NSF Research Trainee scholarship in Complex Networks and Systems (\$5,000)	2018

# Presentations Tutorials and Demos

•	Expl	loring emerging socia	l media:	acquiring,	processing	, and vis	sualizing da	ata with Py	thon
	and	OSoMe web tools							
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IC<sup>2</sup>S<sup>2</sup> 2024 (Philadelphia, US)
 Identifying social media manipulation with OSoMe tools

Computation + Journalism Conference – C+J 2022 (Virtual) Jun. 2022  $IC^2S^2$  2020 (Virtual) Jul. 2020

• Introduction to Botometer®

Visit by former Dominican Republic president Leonel Fernández (Bloomington, US) Apr. 2022

Invited demo at the Learning Informatics Lab, University of Minnesota (Virtual)  Knight Research Network Tool Demonstration Day (Virtual)  • Fast and flexible ranking on bipartite networks with Python and R  Indiana University Network Institute workshop series (Bloomington, US)  Nov. 2021  Talks  • Anatomy of AI-powered malicious social bots [J1]  IC <sup>2</sup> S <sup>2</sup> 2024 (Philadelphia, US)  ICWSM 2024 (Buffalo, US)  Communication Horizons Conference at UC Davis (Davis, US)  • Fantastic bots and how to find them [J5, J7, J16, J17, W5, C4, C5, J22]  Invited talk at Intelligent and Computational Communication Salon, Beijing Normal University (Virtual)  Invited talk at Manning College of Information & Computer Sciences, University of Massachusetts Amherst (Amherst, US)  Nov. 2023  Invited talk at Yangtze Delta Region Institute (Huzhou), University of Electronic Science and
<ul> <li>Fast and flexible ranking on bipartite networks with Python and R Indiana University Network Institute workshop series (Bloomington, US) Nov. 2021  Talks         <ul> <li>Anatomy of AI-powered malicious social bots [J1]</li></ul></li></ul>
Indiana University Network Institute workshop series (Bloomington, US)  Nov. 2021  Talks  Anatomy of AI-powered malicious social bots [J1]  IC <sup>2</sup> S <sup>2</sup> 2024 (Philadelphia, US)  ICWSM 2024 (Buffalo, US)  Communication Horizons Conference at UC Davis (Davis, US)  Fantastic bots and how to find them [J5, J7, J16, J17, W5, C4, C5, J22]  Invited talk at Intelligent and Computational Communication Salon, Beijing Normal University (Virtual)  Invited talk at Manning College of Information & Computer Sciences, University of Massachusetts Amherst (Amherst, US)  Nov. 2023  Invited talk at Yangtze Delta Region Institute (Huzhou), University of Electronic Science and
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<ul> <li>Anatomy of AI-powered malicious social bots [J1]         IC<sup>2</sup>S<sup>2</sup> 2024 (Philadelphia, US)         Jul. 2024         ICWSM 2024 (Buffalo, US)         Jun. 2024         Communication Horizons Conference at UC Davis (Davis, US)         May 2024</li> <li>Fantastic bots and how to find them [J5, J7, J16, J17, W5, C4, C5, J22]         Invited talk at Intelligent and Computational Communication Salon, Beijing Normal University (Virtual)         Jul. 2024         Invited talk at Manning College of Information &amp; Computer Sciences, University of Massachusetts Amherst (Amherst, US)         Nov. 2023         Invited talk at Yangtze Delta Region Institute (Huzhou), University of Electronic Science and</li> </ul>
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ICWSM 2024 (Buffalo, US)  Communication Horizons Conference at UC Davis (Davis, US)  • Fantastic bots and how to find them [J5, J7, J16, J17, W5, C4, C5, J22]  Invited talk at Intelligent and Computational Communication Salon, Beijing Normal University (Virtual)  Invited talk at Manning College of Information & Computer Sciences, University of Massachusetts Amherst (Amherst, US)  Nov. 2023  Invited talk at Yangtze Delta Region Institute (Huzhou), University of Electronic Science and
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Taskuslasu of China (Huzhan China)
Technology of China (Huzhou, China) Aug. 2023
Invited talk at International Academic Center of Complex Systems, Beijing Normal University –
Zhuhai (Zhuhai, China) Jul. 2023
Invited talk at Summer Institutes in Computational Social Science 2023 – Beijing (Beijing, China)
Jul. 2023
Invited talk at New Media Research Center, Beijing Normal University (Beijing, China)
Jul. 2023
Invited talk at Social Computing Group, University of Zurich (Virtual) Feb. 2023
Invited talk at Computational Methods Research Group, UW-Madison (Virtual) Feb. 2023
• Accuracy and political bias of news source credibility ratings by large language mod-
els [R1]
$IC^2S^2$ 2024 (Philadelphia, US)  Jul. 2024
Trust and Safety Research Conference (Palo Alto, US)  Aug. 2023
• Dissemination Patterns of Political Fact-Checks on Twitter
IC <sup>2</sup> S <sup>2</sup> 2024 (Philadelphia, US) Jul. 2024
• Revealing localness of news domains through sharing patterns on social media
Annual Midwest Political Science Association Conference (Chicago, US)  Apr. 2024
• LLMs and cyber social threats: Good, bad, and ugly [R1, J1, R4]
Rising Scholars Conference at MIT (Cambridge, US)  Oct. 2023
Invited talk at Workshop on Applications of LLMs in Media (Beijing, China)  Jul. 2023
Invited talk at School of Journalism, Fudan University (Shanghai, China)  Jun. 2023
• Wrestling with the changing API of social media platforms: The case of Botometer
Post-API Conference (Philadelphia, US)  Oct. 2023
• Artificial intelligence is ineffective and potentially harmful for fact checking [R4]
Politics and Computational Social Science Conference (Los Angeles, US)  Aug. 2023  The COVID 10 Infedencies providence adverse actors and real yearld impact [111, 112]
• The COVID-19 Infodemic: prevalence, adverse actors, and real-world impact [J11, J13,
W5] 2022 INFORMS Annual Meeting (Indianapolis, US) Oct. 2022
ę ,
Invited talk at Computational Social Science Lab at Penn (Virtual)  Future Leaders Summit 2022 (Ann Arbor, US)  Apr. 2022
<ul> <li>Future Leaders Summit 2022 (Ann Arbor, US)</li> <li>Apr. 2022</li> <li>The COVID-19 Infodemic: Twitter versus Facebook [J13]</li> </ul>
Social Media Lab Guest Speaker Series (Virtual) Oct. 2021 $IC^2S^2$ 2021 (Virtual) Jul. 2021
NetSci 2021 (Virtual)  Jul. 2021  Jul. 2021
Computation + Journalism Symposium - C+J 2021 (Virtual) Feb. 2021
Companion 1 journment Symposium C1 j 2021 (Virtum) 160. 2021

The 3rd North American Social Networks Conference – NASN 2021 (Virtual) Jan. 2021 Bipartite network centrality comparison: A study of opioid doctor shopping [J6]  $IC^2S^2$  2020 (Virtual) Jul. 2020 • Prevalence of low-credibility information on Twitter during the COVID-19 outbreak [W5] CySoc 2020 (Virtual) Jun. 2020 • BotometerLite [C4]  $IC^2S^2$  2020 (Virtual) Jul. 2020 AAAI 2020 (New York, US) Feb. 2020 • Bot Electioneering Volume [W7] CyberSafety 2019 (San Francisco, US) May 2019

# Work Experience

# US Senate Aging Committee, remote

Individual consultant on the use of AI for scamming Aug., Nov. 2023

Analysis Group, MA, US

Consultant for the trial of Elon Musk vs. Twitter Aug. 2022 – Oct. 2022

TikTok Inc. (ByteDance), CA, US

Security engineering intern May 2021 – Aug. 2021

# TEACHING EXPERIENCE

# Indiana University, IN, US

Guest lecturer, INFO-T100 Social Media Manipulation 101 Fall 2022
Associate instructor, INFO-I590 Applied Data Science Fall 2017, Spring 2018

#### SERVICE

## Research Community Advocate for Open Access to Social Media Data:

- Drafting open letters regarding Twitter and Reddit's decisions to restrict data access
- Conducting survey to gauge the impact of data loss (cited by court ruling that dismissed Twitter/X's lawsuit against CCDH) and coordinating mutual aids
- Outreaching to news media to express concerns: Reuters, The Verge, TechCrunch, CNN, Tech Policy Press
- Conducting DSA Data Access Audit

**Guest Editor:** EPJ Data Science: Special Issue on Computational Approaches for Cyber Social Threats;

**Conference Organizer**: Publicity chair @ 18th International AAAI Conference on Web and Social Media (ICWSM24);

**Workshop Organizer:** International Workshop on Cyber Social Threats 2024 (CySoc) @ ICWSM24; International Workshop on Cyber Social Threats 2023 (CySoc) @ WebConf23; International Workshop on Cyber Social Threats 2022 (CySoc) @ ICWSM22;

# Journal Reviewer:

- Interdisciplinary: PNAS (23); PNAS Nexus (23); Scientific Reports (22, 23); PLoS ONE (21-23); Royal Society Open Science (22); Journal of the Royal Society Interface (22);
- Computer/information sciences, data mining: Nature Machine Intelligence (23); ACM Computing Surveys (23); ACM Digital Threats: Research and Practice (21); ACM Transactions on Information Systems (23); AI and Ethics (24); Applied Network Science (24); Behaviour & Information Technology (23); Big Data & Society (21); Computers & Security (21); Computer networks (24); Decision Support Systems (22); EPJ Data Science (23); IEEE Internet Computing (21); IEEE Transactions on Knowledge and Data Engineering (21); IEEE Transactions on Network Science and Engineering (23); Transactions on Asian and Low-Resource Language Information Processing (24); Information Process-

- ing & Management (21, 24); International Journal of Data Science and Analytics (21); International Journal of Human-Computer Interaction (22, 24); International Journal of Information Technology & Decision Making (21); Journal of Big Data (23, 24); Journal of Computational Social Science (22-24); Journal of Quantitative Description: Digital Media (24); Online Social Networks and Media (21, 22, 24); PeerJ Computer Science (20, 22, 24); Progress in Artificial Intelligence (23); Social Network Analysis and Mining (21-24); Social Science Computer Review (24);
- Social sciences: New Media & Society (23); HKS Misinformation Review (23, 24); Communication Methods and Measures (24); Humanities & Social Sciences Communications (21-24); Technology in Society (24); Telematics and Informatics (23); Information, Communication and Society (21, 24); International Communication Gazette (21); Journal of Health Communication (23); Political Research Exchange (21); Public Understanding of Science (23); Socius (22);
- Health: Journal of Medical Internet Research (22-24); BMC Digital Health (23); Drug and Alcohol Dependence (23); Frontiers in Public Health (22); JMIR Infodemiology (22, 23); JMIR Public Health and Surveillance (22);

#### **Conference Reviewer:**

- Computer/information sciences, data mining: CSCW (22, 23); CIKM (21-24); ICWSM (20-24); WebSci (22-24); WebConf (22-24);
- Computational social science: IC2S2 (24); Computation + Journalism Symposium (24);
- Network science: Complex Networks (23);

#### In the press

## Selected Quotations and Interviews

- AI and information integrity: Time (Feb. 2024);
- Social media in general: Reuters (Nov. 2023); Reuters (Jul. 2023); The Verge (May 2023); TechCrunch (Feb. 2023); CNN (Feb. 2023); Tech Policy Press (Feb. 2023);
- Social bots and other inauthentic actors on social media: NBC News (Jul. 2024); Sherwood News (Jul. 2024); Tortoise (Feb. 2024); Business Insider (Aug. 2023); WIRED (Sep. 2022); WIRED (Sep. 2022); BBC (Aug. 2022); Ars Technica (Aug. 2022); Yahoo! Finance (Aug. 2022); CNN (Aug. 2022); Yahoo! Finance (Aug. 2022); CNN (Jun. 2022); The Wall Street Journal (Jun. 2022); The Washington Post (May 2022); Politico (May 2022); Business Insider (May 2022); Yahoo! News (May 2022); Spectrum News (Apr. 2022);
- Online misinformation: WISH-TV (Sep. 2022); IEEE Spectrum (Jul. 2020);

## Selected Media Coverage of My Works

- AI-powered inauthentic social media accounts [J1, J2]: MIT Technology Review (Mar. 2024); IEEE Spectrum (Feb. 2024); PolitiFact (Dec. 2023); Publico (Dec. 2023); Wired (Oct. 2023); Business Insider (Aug. 2023); Breitbart (Aug. 2023); New York Post (Aug. 2023); Wired (Aug. 2023); Mashable (Aug. 2023); Business Insider (Aug. 2023); MIT Technology Review (Aug. 2023); Tech Policy Press (Aug. 2023);
- Botometer® [C5, J22] & BotAmp: Forbes (Aug. 2023); The Washington Post (Jun. 2023); Business Insider (May 2023); i (May 2023); The Hill (May 2023); Vice (Apr. 2023); PEN America Mar. 2023; ABC Action News (Jan. 2023); Poder360 (Jan. 2023); Newsweek (Dec. 2022); Business Insider (Nov. 2022); The Daily Star (Nov. 2022); USA Today (Oct. 2022); Daily Maverick (Oct. 2022); CNN (Oct. 2022); The Washington Times (Sep. 2022); The Economic Times (Sep. 2022); CNN (Sep. 2022); Quotidiano Nazionale (Aug. 2022); The Guardian (Aug. 2022); The National Interest (Aug. 2022); The Verge (Aug. 2022); Yahoo! Finance (Aug. 2022); CNN (Aug. 2022); CNBC (Aug. 2022); Washington Examiner (Aug. 2022); Engadget (Aug. 2022); The Washington Post (Aug. 2022); The New York Times (Aug. 2022); Inc. Magazine (Aug. 2022); Newsweek (Aug. 2022); Snopes (Jul. 2022); USA Today (Jun. 2022); Slate (Jun.

- 2022); Forbes (Jun. 2022); Wired (May 2022); The Washington Post (May 2022); Los Angeles Times (Apr. 2022);
- CoVaxxy [W3]: AP News (Oct. 2023); Washington Examiner (Jun. 2023); The New York Times (May 2022); AP News (Dec. 2021); USA Today (Mar. 2021);
- Online misinformation is linked to early COVID-19 vaccination hesitancy and refusal [J11]: ilpost (Nov. 2023); The Hill (Feb. 2023); Global Citizen (Aug. 2022); Medical News Today (Aug. 2022); Time (May 2022); News-Medical (May 2022); Tech Policy Press (Apr. 2022); Slate (Apr. 2022);
- Neutral bots probe political bias on social media [J16]: The Hill (Feb. 2023); NBC News (Apr. 2022); Metro (Apr. 2022); Rolling Stone (Apr. 2022);
- COVID-19 Infodemic on Twitter and Facebook [J13]: News 5 (Jan. 2022); The Conversation (Jul. 2021);
- Hoaxy®: MakeUseOf (Jan. 2023); MIT Technology Review (Dec. 2022); Media Matters for America (Dec. 2022); The Conversation (Oct. 2022); Bloomberg (Nov. 2020); NBC News (Feb. 2020);
- The spread of low-credibility content by social bots [J25]: The Conversation (May 2024); ABC (Mar. 2024); Scientific American (Feb. 2024); Salon (Sep. 2020); ScienceNews (Nov. 2018); MIT Technology Review (Aug. 2017);

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