# Hazem Ibrahim

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## BIO

I am a final-year PhD candidate in Computer Science at NYU, working at the intersection of computational social science and human-AI interaction. I study how algorithms, data, and institutions create systematic inequalities in who is seen, heard, and valued. My research spans three threads: algorithmic audits of social media platforms, the integrity of the scientific record in the age of AI, and representational bias in news and entertainment media. Across all three, I build large datasets to measure bias in the systems we rely on, run experiments to understand where it comes from, and propose ways to fix it. My work has been published in *Nature*, *PNAS Nexus*, and *Scientific Reports*, covered by *Nature*, *Science*, *Scientific American*, *The Guardian*, and *The Times*, and recognized with the 2026 Google PhD Fellowship in Human-Computer Interaction and a place on MIT Technology Review's Innovators Under 35 list.

## EDUCATION & AFFILIATIONS

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|---|---|
| 2023–2027 (expected) | **Ph.D.**, Computer Science, New York University<br>Thesis: *Understanding bias, inequality, and human behavior in socio-technical systems.*<br>Advisor: Yasir Zaki |
| 2018–2020 | **M.Sc.**, Computer Science, University of Toronto<br>Advisor: Syed Ishtiaque Ahmed |
| 2014–2018 | **B.Sc.**, Computer Engineering, New York University Abu Dhabi |
| 2026– | **Affiliate Member**, Center for Interdisciplinary Data Science & AI, NYU Abu Dhabi |

## FELLOWSHIPS, GRANTS & AWARDS

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|---|---|
| 2026 | Google PhD Fellowship in Human-Computer Interaction ($50,000) |
| 2023–2027 | Global PhD Fellowship, NYU Abu Dhabi (full tuition and stipend) |
| 2024 | Global PhD Travel Award, NYU Abu Dhabi ($1,000) |
| 2018–2020 | Full graduate funding, University of Toronto |
| 2026 | Best Poster Award (Societal Advancement), NYU Abu Dhabi Research Showcase |
| 2025 | Best Poster Award, AI4GS |
| 2024 | Best Parallel Talk Award, IC2S2 |
| 2024 | Best Poster Award, IC2S2 |
| 2023 | Innovators Under 35, MIT Technology Review |
| 2018 | Founder's Day Award, NYU Abu Dhabi |

## SELECTED MEDIA COVERAGE

Bracketed numbers refer to the publication list below.

2026 **Nature**: TikTok's algorithm systematically skewed to the right during the 2024 US elections [2]

2026 **The Guardian**: TikTok's algorithm favored Republican content in 2024 US elections [2]

2026 **El País**: TikTok helped Trump win the 2024 election [2]

2026 **UPI**: Study says that TikTok algorithm prioritized Republican content [2]

2025 **United Nations**: Human Development Report 2025 – A matter of choice: People and possibilities in the age of AI [11]

2024 **Nature**: The citation black market: schemes selling fake references alarm scientists [6]

2024 **Science**: Vendor offering citations for purchase is latest bad actor in scholarly publishing [6]

2023 **Scientific American**: ChatGPT can get good grades. What should educators do about it? [11]

2023 **The Times**: Students "double cheat" to hide AI in their answers [11]

2023 **New Scientist**: ChatGPT gets better marks than students in some university courses [11]

2023 **The Independent**: AI can write better university assignments than students [11]

Additional coverage in *Daily Mail*, *The Daily Beast*, *The Telegraph*, *Science & Vie*, *The Register*, and the *OECD AI Incidents Monitor*, among others.

## PUBLICATIONS

[*] denotes corresponding author; [†] denotes joint first authorship.

### Published

[1] **Ibrahim, H.**[*] & Zaki, Y. Chance, persistent advantage, and the generative-AI era in open-source package careers. In *Proc. International AAAI Conference on Web and Social Media (ICWSM)* (2027, forthcoming).

[2] **Ibrahim, H.**[†], Jang, H. D.[†], Aldahoul, N., Kaufman, A. R., Rahwan, T. & Zaki, Y. Systematic partisan content skews in TikTok during the 2024 U.S. elections. *Nature* (2026).

[3] Jang, H. D., **Ibrahim, H.**, Asim, R., Varvello, M. & Zaki, Y. A tale of three location trackers: AirTag, SmartTag, and Tile. In *Proc. ACM Internet Measurement Conference* (2026).

[4] Khan, F. K., **Ibrahim, H.**, AlDahoul, N., Rahwan, T. & Zaki, Y. Who gets seen in the age of AI? Adoption patterns of large language models in scholarly writing and citation outcomes. *Journal of Informetrics* 20, 101869 (2026).

[5] **Ibrahim, H.**, Khan, F. K., Rahwan, T. & Zaki, Y. Analyzing political stances on Twitter/X in the lead-up to the 2024 U.S. election. *PoliticalNLP Workshop at LREC (2026).*

[6] **Ibrahim, H.**[†], Liu, F.[†], Zaki, Y. & Rahwan, T. Citation manipulation through citation mills and pre-print servers. *Scientific Reports* 15, 5480 (2025).

[7] **Ibrahim, H.**, Sabie, D., Roy, P., Bhattacharjee, A., Alam, S. M. R., Mim, N. J. & Ahmed, S. I. Heritage language maintenance: The case of Bangladeshi immigrants in Canada. *Interaction Design and Architecture(s) Journal (IxD&A)*, 170–206 (2025).

[8] **Ibrahim, H.**, Debicki, M., Rahwan, T. & Zaki, Y. Big tech dominance despite global mistrust. *IEEE Transactions on Computational Social Systems* 11, 3741–3752 (2024).

[9] **Ibrahim, H.**, AlDahoul, N., Lee, S., Rahwan, T. & Zaki, Y. YouTube's recommendation algorithm is left-leaning in the United States. *PNAS Nexus* 2, pgad264 (2023).

[10] **Ibrahim, H.**, Asim, R., Zaffar, F., Rahwan, T. & Zaki, Y. Rethinking homework in the age of artificial intelligence. *IEEE Intelligent Systems* 38, 24–27 (2023).

[11] **Ibrahim, H.**, Liu, F., Asim, R., Battu, B., Benabderrahmane, S., Alhafni, B., Adnan, W., Alhanai, T., AlShebli, B., Baghdadi, R. et al. Perception, performance, and detectability of conversational artificial intelligence across 32 university courses. *Scientific Reports* 13, 12187 (2023).

[12] **Ibrahim, H.**, Asim, R., Varvello, M. & Zaki, Y. I tag, you tag, everybody tags! In *Proc. ACM Internet Measurement Conference* (2023), 561–568.

[13] **Ibrahim, H.** & Ibrahim, W. Gamification in online educational systems. In *6th International Conference on Higher Education Advances (HEAd'20)* (2020), 1217–1224.

[14] Ibrahim, W. & **Ibrahim, H.** Multithreaded and reconvergent aware algorithms for accurate digital circuits reliability estimation. *IEEE Transactions on Reliability* 68, 514–525 (2018).

### Preprints & Under Review

[15] **Ibrahim, H.**†, Liu, F.†, Mengal, K., Alshaibi, W., Kaufman, A. R., Zaki, Y. & Rahwan, T. Causal evidence of racial and institutional biases in accessing paywalled articles and scientific data (2025). *Under review at Nature.*

[16] **Ibrahim, H.**, Rahwan, T., Zaki, Y. & Park, M. On-screen inertia: persistent racial and gender disparities in Hollywood film (1900–2024). arXiv:2608.28613 (2026). *Under review at PNAS.*

[17] **Ibrahim, H.**†, AlDahoul, N.†, Abbasi, S. M. A., Zaffar, F., Rahwan, T. & Zaki, Y. A longitudinal analysis of racial and gender bias in New York Times and Fox News images and articles (2025). *Under review at Scientific Reports.*

[18] Kuo, C. W.†, Chu, K.†, AlDahoul, N.†, **Ibrahim, H.**†, Rahwan, T. & Zaki, Y. Neutralizing the narrative: AI-powered debiasing of online news articles (2025). *Revise and resubmit at Engineering Applications of Artificial Intelligence.*

[19] AlDahoul, N.†, **Ibrahim, H.**†, Park, M., Rahwan, T. & Zaki, Y. Inclusive content reduces racial and gender biases, yet non-inclusive content dominates popular media outlets (2025). *Under review at EPJ Data Science.*

[20] Aldahoul, N., **Ibrahim, H.**, Kaufman, A. R., Rahwan, T. & Zaki, Y. The political ideology of large language models: measurement, inconsistency, and persuasive influence. arXiv:2505.04171 (2025). *Revise and resubmit at American Political Science Review.*

[21] **Ibrahim, H.**, et al. Schadenfreude in the digital public sphere: a cross-national and decade-long analysis. arXiv:2601.20413 (2026). *Under review at Journal of Big Data.*

[22] **Ibrahim, H.*** & Girmay, T. Auditing differential visibility of political content on TikTok. arXiv:2607.17356 (2026). *Preprint.*

[23] **Ibrahim, H.*** & Zaki, Y. Informational help-seeking on Reddit did not decline after ChatGPT. arXiv:2609.12447 (2026). *Preprint.*

[24] **Ibrahim, H.*** & Zaki, Y. Price dislocations, news citations, and epistemic leverage on Polymarket. arXiv:2609.06005 (2026). *Revise and resubmit at ICWSM 2027.*

[25] **Ibrahim, H.*** & Zaki, Y. Understanding AI provider recommendations in local service markets. arXiv:2609.18341 (2026). *Under review at The Web Conference (WWW) 2027.*

[26] Liu, F., **Ibrahim, H.**, Zaki, Y. & Rahwan, T. The illusion of neutrality in metric-based research evaluation. arXiv:2609.24471 (2026). *Under review at PNAS (Brief Report).*

[27] **Ibrahim, H.***, Rahwan, T. & Zaki, Y. Bias at the borderline: who gets the benefit of the doubt in peer review? arXiv:2607.26280 (2026). *Under review at ACM FAccT 2027.*

[28] **Ibrahim, H.*** & Zaki, Y. Evaluating decision models for text annotation in computational social science. arXiv:2609.24574 (2026). *Under review at ACL Rolling Review (ARR) 2027.*

[29] **Ibrahim, H.**, Omari, A. & Kaufman, A. R. Multidimensional political attitudes and polarization across 141 countries. SSRN 7513619 (2026). *Preprint.*

[30] Kaufman, A. R., **Ibrahim, H.**, Omari, A., Rabbani, S., Aldahoul, N., Rahwan, T. & Zaki, Y. Locating LLM expressed ideology in the global distribution of political attitudes. SSRN 7522318 (2026). *Preprint.*

## TEACHING

**New York University Abu Dhabi** — Instructor

| | |
|---|---|
| 2021–2022 | Machine Learning (CS-UH 2220) — Spring 2022 |
| 2021–2022 | Computational Social Science (CS-UH 2219E) — Spring 2021, Fall 2021 |
| 2021–2022 | Database Systems (CS-UH 2214) — Fall 2021, Spring 2022 |
| 2021–2022 | Data Structures (CS-UH 1050) — Spring 2021, Fall 2021 |
| 2020–2022 | Discrete Mathematics (CS-UH 1002) — Fall 2021, Spring 2022, Summer 2022 |
| 2020–2022 | Introduction to Computer Science (CS-UH 1001) — Fall 2020, Summer 2021, Fall 2021 |

**University of Toronto** — Teaching Assistant

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|---|---|
| 2018–2019 | Introduction to Computer Science (CSC148H) — Fall 2018, Spring 2018, Fall 2019 |

## ACADEMIC ADVISING

**Undergraduate Students Supervised**

| | |
|---|---|
| 2026 | Yana Holovatska, NYU Abu Dhabi |
| 2026 | Tewoflos Girmay, NYU Abu Dhabi |
| 2025 | Farhan Kamrul Khan, NYU Abu Dhabi |
| 2025 | Chen Wei Kuo, NYU Abu Dhabi |
| 2025 | Kevin Chu, NYU Abu Dhabi |

## ACADEMIC SERVICE

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| Reviewer | *PNAS Nexus*, AAAI ICWSM, IC2S2, ACM The Web Conference (WWW), ACM CHI, ACM CSCW, *Scientometrics* |

## INDUSTRY EXPERIENCE

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| 2017 | Software Engineering Intern, Meta, London, United Kingdom |