Nick Hagar

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Professional Experience

Assistant Professor, Hubbard School of Journalism and Mass Communication, University of Minnesota (August 2026-Present)

Postdoctoral Scholar, Generative AI in the Newsroom, Northwestern University (August 2024-August 2026)

Machine Learning Data Scientist, The New York Times (March 2023-July 2024)

Research Engineer (Contract), Meta (June 2022 - January 2023)

Data Scientist (Contract), Patreon (January - March 2022)

Data Analyst, Fusion Media Group (2017-2018)

Education

Ph.D., Media, Technology, and Society, Northwestern University (2023)
Dissertation: "Computational Study of News Systems: Embracing the Complexity Paradigm"
Committee: Nicholas Diakopoulos (Chair), Aaron Shaw, and Agnes Horvat

M.A., Media, Technology, and Society, Northwestern University (2020)

B.S., Journalism, Northwestern University (2017)

Academic Affiliations and Leadership

Core Member, University of Minnesota AI Hub (2026—Present)

Faculty Associate, Public Tech Media Lab, University of Wisconsin—Madison (2026–Present)

Founding Organizer, Agentic AI Investigative Journalism Challenge, Generative AI in the Newsroom, Northwestern University (2026)

Publications

Hagar, N. (Forthcoming). One Community, Many Topics: Structured Heterogeneity in a Conspiracy-Oriented Publisher Ecology. *Proceedings of the Annual Hawaii International Conference on System Sciences*.

Hagar, N. & Diakopoulos, N. (2026). Runtime Configuration for Situated Governance of AI Agents: A Case Study in Investigative Journalism. *AI and Ethics*. doi:10.1007/s43681-026-01298-7

Li, C., **Hagar, N.**, Nishal, S., Gilbert, J., & Diakopoulos, N. (2026). Towards Real-World Validity in Generative AI Benchmarks: Understanding and Designing Domain-Centered Evaluations for Journalism Practitioners. *Proceedings of the 2026 Designing Interactive Systems Conference*.

Hagar, N. (2026). Classifying news articles from URLs alone: A small-data method for sorting and filtering digital news coverage. *Computational Communication Research*. doi:10.5117/CCR2026.1.1.HAGA

Hagar, N., & Bandy, J. (2025). Practical Datasets for Analyzing LLM Corpora Derived from Common Crawl. *ICWSM 2025*. doi:10.1609/icwsm.v19i1.35948

Hagar, N., & Diakopoulos, N. (2023). Algorithmic indifference: The dearth of news recommendations on TikTok. *New Media & Society*. doi:10.1177/14614448231192964

Hagar, N., & Shaw, A. (2022). Concentration without cumulative advantage: The distribution of news source attention in online communities. *Journal of Communication*. doi:10.1093/joc/jqac032

Hagar, N., DeWilde, B., & Diakopoulos, N. (2021). Anticipating Attention: On the Predictability of News Headline Tests. *Digital Journalism*. doi:10.1080/21670811.2021.1984266

Hagar, N., Wachs, J., & Horvát, E.-Á. (2021). Writer movements between news outlets reflect political polarization in media. *New Media & Society*. doi: 10.1177/14614448211027173

Hagar, N., & Diakopoulos, N. (2019). Optimizing Content with A/B Headline Testing: Changing Newsroom Practices. *Media and Communication*, *7*(1), 117. doi: 10.17645/mac.v7i1.1801

Working Papers

Hagar, N., Gilbert, J., & Diakopoulos, N. From Benchmarks to Situated Workflows: Evaluating AI Agents Through an Open Challenge. *Under review for CHI 2027.*

Hagar, N. & Diakopoulos, N. Testing the Tests: The Evidentiary Quality of Newsroom Headline Experiments. *Under review for Computational Communication Research.*

Hagar, N., Zier, J., & Diakopoulos, N. “I Kind of Know What's Going On”: The Trust-Labor Bargain in GenAI-Mediated News Seeking. *Under revision for Information, Communication & Society*.

Hagar, N. & Bandy, J. Tracing the Genealogy of LLM Training Data. *Under review for Journal of Quantitative Description: Digital Media*.

Hagar, N. From Benchmarks to Behaviors: A Framework for Auditing AI Agents. *Under review for ICA 2027.*

Invited Talks, Panels, and Practitioner Presentations

Invited talk. Hacks/Hackers AI x Journalism Summit. "AI Coding Agents for Investigative Journalism." Baltimore, Maryland. May, 2026.

Invited talk. Local Politics and AI Workshop. "Coding agents as reporting tools for local politics." University of Michigan, Ann Arbor, Michigan. April, 2026.

Panel. ONA26. "Empowering Better Business Decisions with AI & Data." Chicago, Illinois. March, 2026.

Panel. Tow Center for Digital Journalism. "AI Search and News." New York, New York. February, 2026.

Practitioner presentation. SRCCON. **Hagar, N.**, Cai, M., & Gilbert J. "Tiny tools for big impact: Local and lightweight LLMs for journalists." Minneapolis, Minnesota. July, 2025.

Panel. Society for Advancing Business Editing and Writing (SABEW). "Harnessing AI in business journalism: How to transform an existential threat into a competitive advantage." Arlington, Virginia. April, 2025.

Conference Presentations

Hagar, N. FieldGuide: A Corpus Map for Token-Efficient Agentic Document Exploration. Computation + Journalism Symposium. 2026. Evanston, Illinois.

Hagar, N. & Diakopoulos, N. Who Gets Cited in Google AI Overviews? News Outlets, UGC Platforms, and Generative Search. Computation + Journalism Symposium. 2026. Evanston, Illinois.

Hagar, N., Diakopoulos, N., & Gilbert, J. On-Premise AI for the Newsroom: Evaluating Small Language Models for Investigative Document Search. Computation + Journalism Symposium. 2026. Miami, Florida.

Hagar, N., Silver, E., Spencer, C. & Diakopoulos, N. LLM-Assisted News Discovery in High-Volume Information Streams: A Case Study. Computation + Journalism Symposium. 2026. Miami, Florida.

Hagar, N., Agustianto, W., & Diakopoulos, N. Not Wrong, But Untrue: LLM Overconfidence in Document-Based Queries. Computation + Journalism Symposium. 2026. Miami, Florida.

Hagar, N. & Nishal, S. "Good Enough" News? Model Substitution for Local Reporting. 2025. ICA preconference. Denver, Colorado.

Hagar, N. Parallels in Linking Behavior between Blogs and Substack Newsletters. 2022. ICA. Paris, France.

Hagar, N., Wachs, J., & Horvat, A. Publishing Patterns Reflect Political Polarization in News Media. 2021. Networks 2021. Virtual, July.

Hagar, N. Archive Scan: Auditing Digital Archives for News Coverage. 2021. ICA. Virtual, May.

Hagar, N. & Shaw, A. Randomly-Generated Inequality in Online News Communities. 2021. ICA. Virtual, May.

Hagar, N. Layoffs and Newsroom Productivity. 2021. ICA. Virtual, May.

Hagar, N. Save Your Work: How to Archive Online Journalism. 2021. NICAR. Virtual, March.

Hagar, N., Bandy, J., Trielli, D., Wang, Y., & Diakopoulos, N. Defining Local News: A Computational Approach. 2021. Computation + Journalism Symposium. Virtual, February.

Hagar, N., Layoffs and Newsroom Productivity. 2020. IC2S2. Virtual, July.

Hagar, N., Wachs, J., & Horvat, A. The Network Structure of Freelance Journalism. 2020. IC2S2. Virtual, July.

Hagar, N., Bandy, J., Trielli, D., Wang, Y., & Diakopoulos, N. Defining Local News: A Computational Approach. 2020. Computation + Journalism Symposium. Boston, Massachusetts, Conference canceled.

Hagar, N. Simulating Attention Allocation in Online News Communities. 2020. MPSA. Chicago, Illinois, Conference canceled.

Hagar, N. & Horvat, A. The Network Structure of Freelance Journalism. 2019. Complex Networks. Lisbon, Portugal, December.

Public Scholarship

Working Copy (Substack newsletter). Writing on the infrastructure of attention, digital platforms, and AI tools for journalism practitioners.
https://attentionmarkets.substack.com/

Contributor, Generative AI in the Newsroom (Northwestern). Blog posts on agentic journalism, local LLMs, document processing, and newsroom AI tooling (2024–present).
https://generative-ai-newsroom.com/

Grants and Fellowships

Institute for Humane Studies, “Persistent Watchdogs: Agentic AI for Accountability Journalism” (2026–27). $7,550.

Knight Lab State of Local Data Fellowship, Northwestern University (2026)

Knight Lab Fellowship, Northwestern University (2025–26)

Generative AI in the Newsroom Postdoctoral Fellowship, Northwestern University (2025–26)

Northwestern Postdoctoral Travel Grant (2025)

Dunford, E., **Hagar, N.**, Smith, A., Abbot, R., & Pedraza, K. Qualify: an R Package for Transparent Data Generation. Summer Institute in Computational Social Science (2019)

Awards and Honors

ACM Transactions on Social Computing Best Reviewer Award (2026)

AdExchanger Award, Best Use of Technology, for BrandMatch, The New York Times (2025)

Teaching Experience

University of Minnesota

Business of Digital Media (JOUR 3551). Instructor of record. Fall 2026.

Digital Media and Culture (JOUR 3751). Instructor of record. Fall 2026.

Northwestern University

Responsible Conduct of Research (Graduate). Instructor of record. Spring 2025, Spring 2026.

Local News + AI (Undergraduate). Co-instructor. Spring 2025, Spring 2026.

NUVention Media (Undergraduate, Graduate). Co-instructor. Winter 2025.

Knight Lab Studio (Undergraduate, Graduate). Co-instructor. Fall 2025.

Research Mentoring

Undergraduate Researchers, Northwestern University

Evan Chen (2025). Research assistant. AI tools for investigative journalism. *Outcomes:* Multiple publications on Generative AI in the Newsroom site; open-sourced tools.

Ethan Silver (2025). Research assistant. LLM-assisted news discovery in high-volume information streams. *Outcomes:* Co-authored Computation + Journalism Symposium paper; published piece on Generative AI in the Newsroom site; presented at Northwestern Undergraduate Research Expo.

Wilma Agustianto (2025). Research assistant. LLM overconfidence in document-based queries. *Outcomes:* Co-authored Computation + Journalism Symposium paper; placement at UNC Hussman School of Journalism (MA).

Ashlyn Wang (2025). Research assistant. Evaluating LLM outputs and prompt engineering for news personalization. *Outcomes:* Published piece on Generative AI in the Newsroom site; placement at Penn Engineering (MA).

Ava Milukas (2025–2026). Research assistant. Evaluating NotebookLM for journalistic backgrounding. *Outcomes:* Published piece on Generative AI in the Newsroom site; presented at Northwestern Undergraduate Research Expo.

Service

Program committee member, Computation + Journalism Symposium 2026

Journal Reviewing

Nature Human Behavior
Science Advances
Digital Journalism
New Media & Society
Social Media and Society
Information, Communication & Society
AI and Ethics
Journalism Studies
Computational Communication Research
International Journal of Press/Politics
ACM Transactions on Social Computing
Humanities and Social Sciences Communications
Scientific Reports
Asian Journal of Communication
Quality & Quantity

Conference Reviewing

HICSS (2026)
CHI (2025, 2027)
CSCW (2021)
ICA (2020)

Software and Datasets

LLM Training Corpus Indices. Open-source datasets indexing web pages included in major LLM training corpora (Common Crawl–derived). *Associated publication:* Hagar & Bandy (2025), ICWSM. Available on HuggingFace. *Adoption:* 6,000 monthly downloads.

substack-api. An unofficial Python wrapper around Substack's API. *Adoption:* 200 stars, 30 forks, 6,000 monthly downloads.

claude-plugins-journalism. Collection of 5 Claude Code skills for investigative journalism workflows, including tipsheet generation, document extraction with human-in-the-loop approval, and investigative analysis. *Adoption:* 15 stars, 1 fork.

Technical Skills

Languages: Python, R, SQL, JavaScript, HTML/CSS

Machine learning and NLP: Large language models (fine-tuning, agentic systems, evaluation), local model deployment, embeddings, topic modeling, classification, annotation pipelines

Data infrastructure: Dagster, DuckDB, S3/MinIO, FastAPI, PostgreSQL; HPC computing (SLURM)

Research methods: Network analysis, agent-based modeling/simulation, statistical analysis, experimental design

Cloud and tooling: GCP, AWS, Git/GitHub, Claude Code