CURRICULUM VITAE

Nicholas M. Vincent

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RESEARCH AREAS

Human-centered Machine Learning (HCML), Responsible Artificial Intelligence (RAI), Human-computer Interaction (HCI), Social Computing,

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ACADEMIC APPOINTMENTS

Postdoctoral Scholar at the University of California, Davis (Davis, CA)
2022 – Present.

- Co-advised by Dr. Seth Frey (UC Davis, Department of Communication) and Dr. Amy X. Zhang (University of Washington, School of Computer Science and Engineering)

EDUCATION

Northwestern University (Evanston, IL)
2017– 2022

- Doctor of Philosophy in Technology and Social Behavior (dual program in Computer Science and Communication), advised by Dr. Brent Hecht
- Dissertation: *Data Leverage: A Framework for Empowering the Public to Mitigate Harms of Artificial Intelligence*

University of California, Los Angeles (Los Angeles, CA)
2012-2016

- Bachelor of Science in Electrical Engineering (magna cum laude)

PUBLICATIONS

Refereed Papers in Archival Publication Venues

[C12] Contractor, D., McDuff, D., Haines, J., Lee, J., Hines, C., Hecht, B., **Vincent, N.**, and Li, H. 2022. Behavioral Use Licensing for Responsible AI. *ACM FAccT 2022*. New York : ACM Press. https://doi.org/10.1145/3531146.3533143

[C11] Bandy, J. and **Vincent, N.** 2021. Addressing "Documentation Debt" in Machine Learning Research: A Retrospective Datasheet for BookCorpus. *NeurIPS 2021 Datasets Track.*

[C10] Chowdhury, F.A., Liu, Y., Saha, K., **Vincent, N.**, Neves, L., Shah, N., and Bos, M.W. 2021. CEAM: The Effectiveness of Cyclic and Ephemeral Attention Models of User Behavior on Social Platforms. In *Proceedings of the International AAAI Conference on Web and Social Media*, *15*(1), 117-128. https://doi.org/10.1609/icwsm.v15i1.18046

[C9] **Vincent, N.** and Hecht, B. 2021. Can "Conscious Data Contribution" Help Users to Exert "Data Leverage" Against Technology Companies? *Proc. ACM Hum.-Comput. Interact.* 5, CSCW1, Article 103 (April 2021), 23 pages. https://doi.org/10.1145/3449177

[C8] **Vincent, N.** and Hecht, B. 2021. A Deeper Investigation of the Importance of Wikipedia Links to Search Engine Results. *Proc. ACM Hum.-Comput. Interact.* 5, CSCW1, Article 4 (April 2021), 15 pages. https://doi.org/10.1145/3449078

[C7] Saha, K., Liu, Y., **Vincent, N.**, Chowdhury, F.A., Neves, L., Shah, N., and Bos, M. 2021. AdverTiming Matters: Examining User Ad Consumption for Effective Ad Allocations on Social Media. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, Article 581, 1–18. https://doi.org/10.1145/3411764.3445394

[C6] **Vincent, N.**, Li, H., Tilly, N., Chancellor, S., and Hecht, B. 2021. Data Leverage: A Framework for Empowering the Public in its Relationship with Technology Companies. *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (*FAccT '21*). Association for Computing Machinery, New York, NY, USA, 215–227. https://doi.org/10.1145/3442188.3445885

[C5] Li, H. *, **Vincent, N. ***, Tsai, J., Kaye, J., and Hecht, B. 2019. How Do People Change Their Technology Use in Protest?: Understanding "Protest Users". *Proc. ACM Hum.-Comput. Interact.* 3, CSCW, Article 87 (November 2019), 22 pages. https://doi.org/10.1145/3359189
* indicates equal contributions.

[C4] **Vincent, N.**, Hecht, B., and Sen, S. 2019. "Data Strikes": Evaluating the Effectiveness of New Forms of Collective Action Against Technology Platforms. In *The World Wide Web Conference* (*WWW '19*). Association for Computing Machinery, New York, NY, USA, 1931–1943. https://doi.org/10.1145/3308558.3313742

[C3] **Vincent, N.**, Johnson, I., Sheehan, P., and Hecht, B. 2019. Measuring the Importance of User-Generated Content to Search Engines. In *Proceedings of the International AAAI Conference on Web and Social Media*, *13*(01), 505-516.

[C2] Foong, E., **Vincent, N.**, Hecht, B., and Gerber, E. 2018. Women (Still) Ask For Less: Gender Differences in Hourly Rate in an Online Labor Marketplace. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW, Article 53 (November 2018), 21 pages. https://doi.org/10.1145/3274322

[C1] **Vincent, N.**, Johnson, I., and Hecht, B. 2018. Examining Wikipedia with a Broader Lens: Quantifying the Value of Wikipedia's Relationships with Other Large-Scale Online Communities. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing*

Systems. Association for Computing Machinery, New York, NY, USA, Paper 566, 1–13. https://doi.org/10.1145/3173574.3174140
* Received a Best Paper award (Top 1% of submissions)

Book Chapters

[B1] Feygin, Y., **Vincent, N.**, Li, H., Lala, C., and Scarcella, L. 2021. From My Data to Our Data: A Proposal to Equitably Distribute Wealth in a Digital Economy, in The Future of Building Wealth: Brief Essays on the Best Ideas to Build Wealth—for Everyone. *Federal Reserve Bank of St. Louis and Aspen Institute Financial Security Program*.

Workshop Papers and Poster Papers

[W7] Li, H., Ajmani, L., Zhou, M., **Vincent, N.**, Hwang, S., Piccardi, T., Narayan, S., Daniel, S. and Veselovsky, V., 2022. Ethical Tensions, Norms, and Directions in the Extraction of Online Volunteer Work. In *Companion Publication of the 2022 Conference on Computer Supported Cooperative Work and Social Computing* (pp. 273-277). https://doi.org/10.1145/3500868.3560923. This paper describes our CSCW workshop.

[W6] Jones, I., Hecht, B., and **Vincent, N.** 2022. Misleading Tweets and Helpful Notes: Investigating Data Labor by Twitter Birdwatch Users. *CSCW'22 Posters.* https://doi.org/10.1145/3500868.3559461

[W5] **Vincent, N.** and Vandevoorde, C. 2022. Collaborative Design of Contribution Tracking Systems for Decentralized Organizations. *Crypto Economics Security Conference (CESC) 2022 Posters.*

[W4] **Vincent, N.** and Hecht, B. 2020. Can "Conscious Data Contribution" Help Users to Exert "Data Leverage" Against Technology Companies? *ACM Collective Intelligence 2020*. This workshop paper was extended and published as [C9] above.

[W3] **Vincent, N.** and Hecht, B. 2020. A Deeper Investigation of the Importance of Wikipedia Links to the Success of Search Engines. *WikiWorkshop 2020.* This workshop paper was extended and published as [C8] above.

[W2] Stier, N., **Vincent, N**., Liebeskind, D. and Scalzo, F. 2015. Deep learning of tissue fate features in acute ischemic stroke. *IEEE Bioinformatics and Biomedicine (BIBM), 2015 (pp. 1316-1321).* IEEE.

[W1] **Vincent, N.**, Stier, N., Yu, S., Liebeskind, D.S., Wang, D.J. and Scalzo, F. 2015. Detection of hyperperfusion on arterial spin labeling using deep learning. *IEEE Bioinformatics and Biomedicine (BIBM), 2015 (pp. 1322-1327)*. IEEE.

Other Publications

[O4] Abhari, R., **Vincent, N.,** Dambanemuya, H.K., Bodon, H. and Horvát, E.Á., 2022. Twitter Engagement with Retracted Articles: Who, When, and How?. *arXiv preprint arXiv:2203.04228*.

[O3] **Vincent, N.** and Hecht, B. 2021. Preview of "Data and its (dis)contents: A survey of dataset development and use in machine learning research". *Patterns*.

[O2] Feygin, Y., Li, H., Lala, C., Hecht, B., **Vincent, N.**, Scarcella, L. and Prewitt, M. 2021. A Data Dividend that Works: Steps toward Building an Equitable Data Economy.

[O1] **Vincent, N.,** Li, Y., Zha, R. and Hecht, B. 2019. Mapping the Potential and Pitfalls of "Data Dividends" as a Means of Sharing the Profits of Artificial Intelligence. arXiv preprint arXiv:1912.00757.

PROFESSIONAL EXPERIENCE

Research Intern at **Microsoft** in Redmond, WA.
Summer 2021
- Advisor: Christian Liensberger. Group: Office the CTO

Research Intern at **Snap Inc.** in Los Angeles, CA.
Summer 2020
- Team: Maarten Bos, Leonardo Neves, Neil Shah, and Yozen Liu. Group: Computational Social Science

Cloud Programming Specialist at **Cloudbakers** in Chicago, IL.
September 2016 – June 2017
- Designed and built custom full-stack web applications for mid-market businesses.

Naval Research Intern at **Space and Naval Warfare Systems Command** in San Diego, CA.
Summer 2015 and Summer 2016
- Advisor: Doug Grimmett

Software Engineer Intern at **Cisco Systems** in San Jose, CA.
Summer 2014
- Worked on integration testing and software build automation for a security product.

Cross Functional Intern at **Cisco Systems** in San Jose, CA.
Summer 2013
- Developed software and analyzed workflow for the Intellectual Assets Protection team.

TEACHING EXPERIENCE

Teaching Assistant at **Northwestern University**
September 2020 – December 2020
- Teaching assistant for Statistics and Statistical Programming

Peer Learning Facilitator at **UCLA's Academic Advancement Program**
September 2014 – June 2015
- Led learning sessions and provided mentoring to students in UCLA's Academic Advancement Program taking differential equations and multivariable calculus.
- UCLA's Academic Advancement Program is a long-standing diversity and equity program focused on supporting historically underrepresented undergraduate students.

PROFESSIONAL SERVICE

Academic Reviewing

- Conferences: ACM SIGCHI | ACM CSCW ("highly useful" distinction in 2022) | AAAI ICWSM (best reviewer award in 2021 and 2022) | NeurIPS Datasets and Benchmarks Track | ACM The Web Conference | ACM FAccT | ACM WSDM
- Journals: PLOS One | Patterns | Information, Communication, and Society | ACM Journal on Responsible Computing

California Data Dividends Initiative Working Group

Sep 2019 – Present

- Led efforts to study and advance "data dividends".

Artificial Intelligence Journal Club Leadership at Northwestern University

April 2019 – Fall 2021

- Served as an officer of the Artificial Intelligence Journal Club, a Ph.D. student group that met weekly to discuss papers in artificial intelligence and machine learning.
- See more here: https://aijcnu.github.io/

Computer Science Ph.D. Advisory Council at Northwestern University

September 2018 – December 2018

- Built community for Computer Science Ph.D. students at Northwestern University and gives students a voice in the department

InfoSocial Conference Co-Chair

Summer 2018 - Summer 2019

- Served as one of two co-chairs for the InfoSocial student-run conference. As a co-chair, I organized the conference, which included papers sessions, panels with faculty and community organizations, and networking opportunities.

Undergraduate Research Mentoring

2017-2021

- Mentored undergraduates in the People, Space, and Algorithms Research Group at Northwestern University: Patrick Sheehan (one quarter: resulted in a publication); Ramish Zaidi (one quarter); Alan Li (three quarters: resulted in a pre-print); Renee Zha (one quarter: resulted in a pre-print); Neil Vakharia (three quarters), Isaiah Jones (one quarter: resulted in a workshop paper).

Selected Talks and Panels

- 2023. Center for Advancing Safety of Machine Intelligence (CASMI) - Toward a Safety Science of AI. Talk on "Algorithmic Contestability".
- 2021. 3rd Obfuscation Workshop. Talk on "Public interest technologies for the ML age".
- 2020. RxC Conference.
- 2018 and 2021. Wikimedia Foundation Showcase.

AWARDS

- Best Reviewer Award at ICWSM 2022
- Best Reviewer Award at ICWSM 2021
- Northwestern University 2019 Presidential Fellowship Finalist
- NSF-GRFP 2018 Honorable Mention
- Best Paper Award (top 1% of submissions) at CHI 2018 for "Examining Wikipedia with a Broader Lens: Quantifying the Value of Wikipedia's Relationships with Other Large-Scale Online Communities."

SELECTED MEDIA COVERAGE

Data leverage

- Le Monde. Aurélien Defer, "Internet users are 'poisoning' their personal data in the fight against online surveillance," April 2022.
- Libération. Nicolas Celnik, "Comment empoisonner ses données pour déboussoler les Gafa," August 2021.
- MIT Technology Review. Karen Hao, "How to poison the data that Big Tech uses to surveil you," March 2021.
- Fortune. Jonathan Vanian and Jeremy Kahn, "Your data is a weapon that can help change corporate behavior," February 2021. This also appeared in the ACM TechNews.
- Quartz. Nicolás Rivero, "Is it time for Netflix subscribers to go on strike?" July 2020.

Data dividends

- Bloomberg. Peter Coy, "Facebook and Others Should Pay Us for Our Data. Here's One Way." May 2021.

Value of Wikipedia

- New York Times. John Herrman, "YouTube May Add to the Burdens of Humble Wikipedia", March 2018. Also covered on the Northwestern Computer Science website.

SKILLS

I work regularly with: Python, JavaScript, machine learning, recommender systems, web development

I have experience with: Julia, R, MATLAB, Java, C++, Django, signal processing, causal inference, mobile development