CURRICULUM VITAE

Nicholas M. Vincent

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RESEARCH AREAS

Human-centered Machine Learning, Responsible AI, Human-computer Interaction (HCI), Social Computing

EDUCATION

Northwestern University (Evanston, IL)

2017 – Present

- Doctor of Philosophy in Technology and Social Behavior (dual program in Computer Science and Communication: https://tsb.northwestern.edu)
- Adviser: Dr. Brent Hecht

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

[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.

[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. DOI: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. DOI: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. DOI: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. DOI: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. DOI: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. DOI: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. DOI: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. DOI: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

- [W4] **Vincent, N.** and Hecht, B. 2020. Can "Conscious Data Contribution" Help Users to Exert "Data Leverage" Against Technology Companies? *ACM Collective Intelligence* 2020.
- [W3] **Vincent, N.** and Hecht, B. 2020. A Deeper Investigation of the Importance of Wikipedia Links to the Success of Search Engines. *WikiWorkshop* 2020.
- [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*. Forthcoming.
- [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

• Integration testing for a security product and automating software build process

Cross Functional Intern at Cisco Systems in San Jose, CA.

Summer 2013

• Developed internal software for the Intellectual Assets Protection team and analyzed company workflow to suggest interventions to protect intellectual assets

TEACHING EXPERIENCE

Teaching Assistant at Northwestern University

September 2020 – December 2020

- Teaching assistant for Statistics and Statistical Programming
- https://wiki.communitydata.science/Statistics and Statistical Programming (Fall 2020)

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
- See more here: https://www.aap.ucla.edu

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 | The Web Conference | FAccT
- Journals: PLOS One | Patterns | Information, Communication, and Society

California Data Dividends Initiative Working Group

Sep 2019 – Present

- Played a leading role in coordinating and writing a report on "data dividends"
- See more here: https://www.datadividends.org/

Artificial Intelligence Journal Club Leadership at Northwestern University

April 2019 – Fall 2021

- Served as one of three officers of the Artificial Intelligence Journal Club, a Ph.D. student group that meets weekly to discuss papers from across 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

- Served on CSPAC, a student organization that builds community for Computer Science Ph.D. students at Northwestern University and gives students a voice in the department
- See more here: https://cspac.cs.northwestern.edu/

InfoSocial Conference Co-Chair

Summer 2018 - Summer 2019

- Served as one of two co-chairs for the InfoSocial Graduate Student Conference. As a co-chair, I organized the conference, which included papers sessions, panels with faculty and community organizations, and networking opportunities.
- InfoSocial is "a student-run conference dedicated to showcasing interdisciplinary graduate student research examining the role of technology in contemporary society"
- See more here: https://infosocial.soc.northwestern.edu

Undergraduate Research Mentoring

2017-2021

• Mentored a variety of undergraduates doing research 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).

Selected Talks and Panels

- 3rd Obfuscation Workshop 2021 Public interest technologies for the ML age: https://3rd.obfuscationworkshop.org/
- 2020 RxC Conference: https://www.radicalxchange.org/events/2020-conference/
- Wikimedia Foundation Showcase in 2018 and 2021: https://www.mediawiki.org/wiki/Wikimedia_Research/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

- <u>Libération</u>. Nicolas Celnik, "Comment empoisonner ses données pour déboussoler les Gafa", August 2021.
- <u>MIT Technology Review.</u> Karen Hao, "How to poison the data that Big Tech uses to surveil you", March 2021.
- <u>Fortune.</u> 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

• <u>Bloomberg.</u> 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

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