Shawndra Hill

Curriculum Vitae

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Background

Education

2007	Ph.D. in Information Systems	New York University
2003	M.Phil. in Information Systems	New York University
1995	BEE in Electrical Engineering	Georgia Institute of Technology
1995	BS in Mathematics	Spelman College

Employment

April 2020 –	Principal Scientist and Manager, Central Applied Science *Meta New York City*
Oct 2020 –	Senior Lecturer, Marketing *Columbia Business School*
Jan 2015 – April 2020	Principal Researcher, Computational Social Science *Microsoft Research New York City*
Jul 2009 –	Visiting Professor, Information Technology Department *Addis Ababa University*
Jul 2015 – June 2016	Adjunct Associate Professor, Operations and Information Management *The Wharton School, University of Pennsylvania*
Jul 2007 – Jun 2015	Assistant Professor, Operations and Information Management *The Wharton School, University of Pennsylvania*
Nov 2014 – Dec 2014	Visiting Professor, Information Systems *Indian School of Business*
May 2003 – Dec 2015	Visiting Researcher *AT&T Labs Research*
Jul 2006 – Jun 2007	Instructor, Operations and Information Management *The Wharton School, University of Pennsylvania*
May 1999– Jul 2000	Account Manager *Siemens Energy & Automation*
Mar 1995 – Apr 1999	Commissioning Engineer (Steel) *Siemens Energy & Automation*

Other Academic Affiliations

- Advisory Board, Data Science Programs at NYU
- Working Group on Women of Color in Computing, National Academies of Sciences, Engineering and Medicine
- University of the People, Computer Science Advisory Board
- Board on Mathematical Sciences and Analytics, National Academies of Sciences, Engineering and Medicine
- Senior Fellow, Wharton Customer Analytics, University of Pennsylvania

Publications

Journal Articles

1. Liu, J., Hill, S., and Rothschild, D. Dynamic Effects of TV Ad Suspension on Keyword Search: Evidence from the U.S. Telecom Industry. Journal of Marketing 90(2) (2026), 73–95.
2. Krupenkin, M., Hill, S., and Rothschild, D. Do partisans make different investment decisions when their party is in power?. Political Behavior (2023), 1–27
3. Hinz, O., Hill, S., and Sharma, A. Second screeningthe influence of concurrent tv consumption on online shopping behavior. Information Systems Research 33, 3 (2022), 809–823
4. Liu, J., Toubia, O., and Hill, S. Content-based model of web search behavior: An application to TV show search. Management Science 67, 10 (2021), 6378–6398
5. Simonov, A., and Hill, S. Competitive advertising on brand search: Traffic stealing and click quality. Marketing Science 40, 5 (2021), 923–945
6. Hinz, O., Hill, S., and Sharma, A. The influence of context on online shopping behavior: The case of concurrent TV consumption. Information Systems Research (2021)
7. Liu, J., and Hill, S. Frontiers: Moment marketing: Measuring dynamics in cross-channel ad effec- tiveness. Marketing Science 40, 1 (2021), 13–22
8. Swaminathan, V., Schwartz, A., Hill, S., and Menezes, R. The language of brands in social media: Using topic modeling on social media conversations to drive brand strategy. Journal of Inter- active Marketing (2021)
9. Hill, S., Benton, A., and Panniello, U. Talkographics: Measuring TV and brand audience demographics and interests from user-generated content. International Journal of Electronic Commerce 23, 3 (2019), 364–404
10. Zhang, H., Hill, S., and Rothschild, D. Addressing selection bias in event studies with generalpurpose social media panels. Journal of Data and Information Quality (JDIQ) 10, 1 (2018), 4
11. Konitzer, T., Rothschild, D., Hill, S., and Wilbur, K. C. Using big data and algorithms to determine the effect of geographically targeted advertising on vote intention: Evidence from the 2012 U.S. presidential election. Political Communication (2018), 1–16
12. Krupenkin, M., Rothschild, D., Hill, S., and Yom-Tov, E. President trump stress disorder: parti- sanship, ethnicity, and expressive reporting of mental distress after the 2016 election. Sage open 9, 1 (2019), 2158244019830865
13. Huberman, G., Konitzer, T., Krupenkin, M., Rothschild, D., and Hill, S. Economic expectations, voting, and economic decisions around elections. In AEA Papers and Proceedings (2018), vol. 108, pp. 597–602
14. Demisse, G., Tadesse, T., Atnafu, S., Hill, S., Wardlow, B., Bayissa, Y., and Shiferaw, A. Informa- tion mining from heterogeneous data sources: A case study on drought predictions. Information 8, 3 (2017), 79
15. Hinz, O., Hill, S., and Kim, J. TV's dirty little secret: The negative effect of popular TV on online auction sales. MIS Quarterly 40, 3 (2016), 623–644
16. Panniello, U., Hill, S., and Gorgoglione, M. The impact of profit incentives on the relevance of online recommendations. Electronic Commerce Research and Applications 20 (2016), 87–104
17. Panniello, U., Hill, S., and Gorgoglione, M. Using context for online customer re-identification. Expert Systems with Applications 64 (2016), 500–511
18. Griffis, H. M., Band, R. A., Ruther, M., Harhay, M., Asch, D. A., Hershey, J. C., Hill, S., Nadkarni, L., Kilaru, A., Branas, C. C., et al. Employment and residential characteristics in relation to automated external defibrillator locations. American heart journal 172 (2016), 185–191
19. Padrez, K. A., Ungar, L., Schwartz, H. A., Smith, R. J., Hill, S., Antanavicius, T., Brown, D. M., Crutchley, P., Asch, D. A., and Merchant, R. M. Linking social media and medical record data: a study of adults presenting to an academic, urban emergency department. BMJ Quality Safety 25, 6 (2016), 414–423

20. Weeg, C., Schwartz, H. A., Hill, S., Merchant, R. M., Arango, C., and Ungar, L. Using twitter to measure public discussion of diseases: a case study. JMIR public health and surveillance 1, 1 (2015)

21. Griffis, H. M., Kilaru, A. S., Werner, R. M., Asch, D. A., Hershey, J. C., Hill, S., Ha, Y. P., Sellers, A., Mahoney, K., and Merchant, R. M. Use of social media across us hospitals: Descriptive analysis of adoption and utilization. Journal of Medical Internet Research 16, 11 (2014)

22. Merchant, R. M., Griffis, H. M., Ha, Y. P., Kilaru, A. S., Sellers, A. M., Hershey, J. C., Hill, S. S., Kramer-Golinkoff, E., Nadkarni, L., Debski, M. M., et al. Hidden in plain sight: A crowdsourced public art contest to make automated external defibrillators more visible. American journal of public health 104, 12 (2014), 2306–2312

23. Ben-Assuli, O., Shabtai, I., Leshno, M., and Hill, S. EHR in emergency rooms: Exploring the ef- fect of key information components on main complaints. Journal of Medical Systems 38, 4 (2014), 1–8

24. Hill, S. TV audience measurement with big data. Big Data 2, 2 (2014), 76–86

25. Merchant, R. M., Asch, D., Hershey, J. C., Griffis, H., Hill, S., Saynisch, O., Leung, A., Asch, J., Lozada, K., Nadkarni, L., Kilaru, A., Branas, C., Starr, L., Shofer, F., Nichol, G., and Becker, L. B. A crowdsourcing innovation challenge to locate and map automated external defibrillators. Circulation: Cardiovascular Quality and Outcomes 6 (2013), 229–236

26. Benton, A., Hill, S., Ungar, L., Chung, A., Leonard, C. E., Freeman, C., and Holmes, J. H. A sys- tem for de-identifying medical message board text. BMC Bioinformatics 12, 3 (2011), s2

27. Benton, A., Ungar, L., Hill, S., Hennessy, S., Mao, J., Chung, A., Leonard, C. E., and Holmes, J. H. Identifying potential adverse effects using the web: A new approach to medical hypothesis generation. Journal of Biomedical Informatics 44, 6 (2011), 989–996

28. Hill, S., Mao, J., Ungar, L., Hennessy, S., Leonard, C. E., and Holmes, J. H. The rise of h1n1 and herbal supplements. Journal of Medical Internet Research 14, 2 (2011)

29. Hill, S., and Ready-Campbell, N. Expert stock picker: The wisdom of (the experts in) crowds. International Journal of Electronic Commerce 15, 3 (2011), 73–102

30. Hill, S., Agarwal, D., Bell, R., and Volinsky, C. Building an effective representation for dynamic networks. Journal of Computational & Graphical Statistics 15, 3 (2006), 584–608

31. Hill, S., Provost, F., and Volinsky, C. Network-based marketing: Identifying likely adopters via consumer networks. Statistical Science 21, 2 (2006), 256–276

32. Bernstein, A., Provost, F., and Hill, S. Toward intelligent assistance for a data mining process: An ontology-based approach for cost-sensitive classification. IEEE Transactions on Knowledge and Data Engineering 17, 4 (2005), 503–518

33. Mao, J. J., Chung, A., Benton, A., Hill, S., Ungar, L., Leonard, C. E., Hennessey, S., and Holmes, J. Online discussion of drug side effects and discontinuation among breast cancer survivors. Pharmacoepidemiology and Drug Safety 22, 3 (2013), 256–62

34. Berhan, G., Hill, S., Atnafu, S., and Tadesse, T. Drought prediction system for improved climate change mitigation. IEEE Transactions on Geoscience and Remote Sensing (TGRS) PP, 99 (2013), 1–6

35. Ranard, B. L., Ha, Y. P., Meisel, Z. F., Asch, D. A., Hill, S., Becker, L. B., Seymour, A. K., and Mer- chant, R. M. Crowdsourcing—harnessing the masses to advance health and medicine, a system- atic review. Journal of General Internal Medicine (2013), 1–17

36. Hill, S., Merchant, R., and Ungar, L. Lessons learned about public health from online crowd surveillance. Big Data 1, 3 (2013), 160–167

37. Chang, A. M., Leung, A., Saynisch, O., Griffis, H., Hill, S., Hershey, J. C., Becker, L. B., Asch, D., Seidman, A., and Merchant, R. M. Using a mobile app and mobile workforce to validate data about emergency public health resources. Emergency Medicine Journal (2013)

38. Leung, A., Asch, D., Lozada, K., Saynisch, O., Asch, J., Becker, N., Griffis, H., Shofer, F., Hershey, J. C., Hill, S., Branas, C., Nichol, G., Becker, L. B., and Merchant, R. M. Where are lifesaving automated external defibrillators located and how hard is it to find them in a large urban city? Resuscitation 84, 7

(2013), 910–914

39. Bosley, J. C., Zhao, N., Hill, S., Shofer, F., Asch, D., Becker, L. B., and Merchant, R. M. Decoding twitter: Surveillance and trends for cardiac arrest and resuscitation communication. Resuscitation 84, 2 (2012), 206–212
40. Benton, A., Holmes, J., Hill, S., Chung, A., and Ungar, L. H. Medpie: An information extraction package for medical message board posts. Bioinformatics 28, 5 (2012), 743–744
41. Berhan, G., Tadesse, T., Atnafu, S., and Hill, S. Using satellite images or drought monitoring: A knowledge discovery approach. Journal of Strategic Innovation and Sustainability 7, 1 (2011), 135– 153
42. Hill, S., and Provost, F. The myth of the double-blind review? author identification using only citations. SIGKDD Explorations 5, 2 (2003), 179–184

Selected Conference Papers

- Wu, Y., Verma, S., Lee, J., Xiong, F., Zhang, P., Awadelkarim, A., Chen, X., Yuan, Y., and Hill, S. LLM Prompt Duel Optimizer: Efficient Label-Free Prompt Optimization. Findings of ACL (2026), 10066–10089.
- Zhang, Y., Altenburger, K. M., Zhang, P., Okano, T., and Hill, S. Node Attribute Prediction with Weighted and Directed Edges on Single and Multilayer Networks. Proceedings of the International AAAI Conference on Web and Social Media 18(1) (2024), 1779–1791.
- Abebe, R., Hill, S., Vaughan, J. W., Small, P. M., and Schwartz, H. A. Using search queries to understand health information needs in africa. In Proceedings of the International AAAI Conference on Web and Social Media (2019), vol. 13, pp. 3–14
- Zhang, Q., Hill, S., and Rothschild, D. Post purchase search engine marketing. In Companion Proceedings of the The Web Conference 2018 (2018), pp. 663–670
- Govindan, P., Eliassi-Rad, T., Xu, J., Hill, S., and Volinsky, C. Structural features threaten privacy across social graphs. In Data Mining in Networks (DaMNet) ICDM (2014)
- Hill, S., Benton, A., and den Bulte, C. V. When does social network-based prediction work? a large scale analysis of brand and tv audience engagement by twitter users. In International Con- ference on Information Systems (ICIS) (2013)
- Ben-assuli, O., Leshno, M., Itamar, S., and Hill, S. Improving medical decision-making using electronic health records systems. In International Conference on Information Systems (ICIS)
- Benton, A., and Hill, S. The spoiler effect?: Designing social TV content that promotes ongoing wom. In Conference on Information Systems and Technology (CIST) (2012)
- Hill, S., and Benton, A. Social TV: Linking TV content to buzz and sales. In International Conference on Information Systems (ICIS) (2012)

Book Chapters

- Berhan, G., Tadesse, T., Atnafu, S., and Hill, S. Experiences of Climate Change Adaptation in Africa. Springer, 2011, ch. Knowledge Discovery from Satellite Images for Drought Monitoring: A Case Study in Ethiopia, pp. 183–200

Working Papers and Preprints

- Lee, K., Letham, B., Lin, Z. J., Samson, E., Onofrey, E., Zhang, P., Hill, S., and Bakshy, E. Offline-to-Online Creative Optimization with Generative Models and Adaptive Testing. arXiv:2607.23696 (2026).
- Zhang, K., Zhang, P., Hill, S., and Awadelkarim, A. Decoding the Hook: A Multimodal LLM Framework for Analyzing the Hooking Period of Video Ads. arXiv:2602.22299 (2026).
- Yang, J., Zhang, P., and Hill, S. MLLM-VADStory: Domain Knowledge-Driven Multimodal LLMs for Video Ad Storyline Insights. arXiv:2601.07850 (2026).

Teaching

- Columbia Business School, "Gen AI Meets Marketing Data." MBA and Executive MBA, 2026; Spring 2027 scheduled.
- Columbia Business School, "Data Science for Marketing Managers." MBA and Executive MBA, 2020–2025.
- University of Addis Ababa, CIT828, "Business Intelligence, Data Warehousing, and Data Mining." Summer 2009, Summer 2010, Summer 2011, Fall 2016.
- Wharton, OPIM 672, "Data Mining for Business Intelligence." Fall 2015.
- Indian School of Business, "Data Mining." Fall 2014.
- Wharton, OPIM 950, "Information Systems Seminar." Fall 2012, Spring 2013.
- Wharton Executive Education, "Social Media." Google and GlaxoSmithKline programs.
- Wharton, OPIM 410/672, "Data Mining for Business Intelligence." Spring 2008, Spring 2009, Spring 2010, Spring 2011, Spring 2013, Spring 2014.
- Wharton, OPIM 101, "Introduction to Information and Operations Management." Spring 2007, Spring 2008, Spring 2009, Spring 2010.
- NYU, C20.001, "Information Technology in Business and Society." Spring 2004.

Honors

2019	Microsoft's Hackathon Marketing Challenge 3rd Place Winner
2019	Best Poster Award, Winter Conference on Business Analytics
2018	Microsoft's Hackathon Marketing Challenge 1st Place Winner
2018	Best Paper Award, China Marketing International Conference
2014	MBA Teaching Commitment and Curricular Innovation Award
2013	Blacks in Action (STEM Research), Alpha Kappa Alpha Sorority, Inc.
2012	Global Competition for Social Media Excellence: Social Media Leadership Award organized by Knowledge@Wharton and Social Strategy
2012	ECRI Institute Health Devices Achievement Award (finalist)
2010	AIS Volunteer Spotlight
2009	INFORMS ISS Design Science Award
2007	Finalist INFORMS George B. Dantzig Dissertation Award
2007	Herman E. Kroos Best Dissertation Award
2005	Finalist, Fifth Annual e-BRC Doctoral Support Award Competition, Penn State University
2005	Selected for Fifth Annual Transatlantic Doctoral Consortium, London Business School, London, England
2005	Selected for Blacks in Action, Alpha Kappa Alpha Sorority, Inc.
2004	Selected for Fred Renwick Research Fellowship
2003	Recognized for Outstanding Ph.D. Student Teaching
2003	3rd Place, KDD Cup 2003 Open Task Competition
2001	Selected for NYU Graduate and Opportunity Fellowship
2001	Selected for KPMG Information Systems Doctoral Fellowship
2003,2005	Selected for NBMBAA, New York Chapter Ph.D. Scholarship
1991	NASA undergraduate research scholar

Outside Activities

Meta, Principal Scientist and Manager, Central Applied Science.

New York University, Advisory Board, Data Science Programs.

University of the People, Computer Science Advisory Board.

Jack and Jill of America, Inc., Empire Chapter, Editor.