SALEEMA AMERSHI

Microsoft Research

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RESEARCH INTERESTS

I am a Researcher in the Adaptive Systems & Interaction Group at Microsoft Research working on technologies to make people better at building and using machine learning systems.

My research lies at the intersection of human-computer interaction and artificial intelligence. In particular, I create general purpose tools for data scientists and engineers building reusable predictive models (e.g., interactive platforms and visualization tools for machine teaching) and application specific techniques for end-users interacting with machine learning-driven systems in their everyday lives (e.g., intelligent assistants, recommender systems, and personalized search). Throughout my work, I distill guiding principles applicable in broader contexts to establish a foundation for human-AI interaction.

http://saleemaamershi.com/

EDUCATION

2007–2012	**Ph.D. Computer Science** University of Washington, Seattle, WA Advisor: Professor James Fogarty Thesis: *Designing for Effective End-User Interaction with Machine Learning* ***Winner of University of Washington's 2013 Distinguished Dissertation Award***
2004-2006	**M.Sc. Computer Science** University of British Columbia, Vancouver, BC Advisor: Professor Cristina Conati Thesis: *Combining Unsupervised and Supervised Machine Learning to Build User Models for Intelligent Learning Environments*
1999-2004	**B.Sc. Computer Science & Mathematics (Double Major)** University of British Columbia, Vancouver, BC

PROFESSIONAL EXPERIENCE

2012-Present	**Microsoft Research, Redmond, WA** Adaptive Systems & Interaction Group (2017-Present), Machine Teaching Group (2012-2017) *Researcher*
2007–2012	**University of Washington, Seattle, WA** Computer Science & Engineering Department Graduate Research Assistant (Advisor: James Fogarty) Investigated the design of effective end-user interaction with machine learning systems.
Fall 2011	**Google Research, Mountain View, CA** *Research Intern (Host: Ed H. Chi)* Explored end-user interactive machine learning in the context of online social networks.
Fall 2010	**IBM Research, Almaden, CA** *Research Intern (Hosts: Jalal Mahmud, Tessa Lau and Jeffrey Nichols)* Developed LiveAction, a machine learning-based approach to building personal Web task models.

Summer 2010	**Microsoft Research, Redmond, WA**
	Research Intern (Host: Bongshin Lee)
	Created CueT, a novel interactive machine learning system for computer network alarm triage.
Summer 2008	**Microsoft Research, Bangalore, India**
	Research Intern (Host: Kentaro Toyama)
	Explored mouse-based text entry for single-display groupware used in underserved classrooms.
Summer 2007	**Microsoft Research, Redmond, WA**
	Research Intern (Host: Meredith Ringel Morris)
	Created CoSearch, a tool for co-located collaborative Web search.
2005-2006	**University of British Columbia, Vancouver, BC**
	Laboratory for Computational Intelligence
	Graduate Research Assistant (Advisor: Cristina Conati)
	Developed a machine learning framework for user modeling in adaptive educational technologies.
2003-2005	**University of British Columbia, Vancouver, BC**
	Laboratory for Computational Intelligence
	Undergraduate Research Assistant (Advisors: Alan Mackworth and David Poole)
	Contributed to AIspace, tools for exploring Artificial Intelligence algorithms.

PROFESSIONAL ACTIVITIES

Industry and Academic Service	Partnership on AI's Collaborations Between People and AI Working Group, 2018-Present
	Microsoft's Aether Working Group on Human-AI Interaction, Co-Chair, 2018-Present
	Microsoft Research AI Residency Program Committee Member, 2018
	UW DUB Student Coordinator, 2008-2009
	UW CSE Student Life Survey Coordinator, 2008-2009
	UW CSE Prospective Student Committee Member, 2008
Organizing Committee	CHI 2016, 2019 Workshop on Human-Centered Machine Learning, Co-Organizer
	IUI 2013 Workshop on Interactive Machine Learning, Organizer
	CHI 2011, Assistant to General Chair
	UIST 2009, Student Volunteer Co-Chair
Program Committee	HCOMP 2019
	UIST 2014, 2018
	KDD 2013-2018 Workshop on Interactive Data Exploration and Analytics (IDEA)
	CHI 2016
	CHI 2016 Workshop on Human-Centered Machine Learning
	IUI 2013-2015
	CHI 2013-2015 Works in Progress
	Grace Hopper 2013
	CHI 2012 Workshop on End-User Interactions with Intelligent Systems
	UIST 2010-2011 (Poster Committee)
	AAAI 2010 Symposium on Artificial Intelligence for Development
Reviewer	CHI 2008-2015, 2017, 2018
	Digital Medicine Journal – Nature 2018
	DIS 2017
	ACM TiiS 2011, 2015, 2017
	IEEE VAST 2016, 2017
	MobileHCI 2012, 2017

IEEE TVCG 2016
UIST 2008, 2010, 2012-2015, 2016
UbiComp 2011-2014, 2016
IJHCS 2016
NSF Review Panel 2015
UbiComp 2011-2014
EuroVis 2012
ACM Transactions on the Web 2012
IEEE Pervasive Computing 2009 – Special Issue on Smarter Phones
Pervasive 2009
EDM Handbook 2009

Student
Volunteer

IJCAI 2009 Workshop on Intelligence and Interaction
UIST 2008

Outreach

Founder of Women's Meeting Group, MSR India, Bangalore, India, 2008
Women in Technology Speaker, Women in Leadership (WIL) Foundation, Vancouver, BC, 2005
Remedial High School Science Teacher, The Learning Center, Burnaby, BC, 2001-2002

TEACHING EXPERIENCE

Spring
2007

Advanced Topics in HCI (CSE 510)
University of Washington, Computer Science & Engineering
Graduate Teaching Assistant for Professor James Fogarty

Winter
2007

Software Engineering (CSE 403)
University of Washington, Computer Science & Engineering
Graduate Teaching Assistant for Marty Stepp

2001-2003

Alma Mater Society (AMS) Tutoring Services
University of British Columbia
Tutor (Math, Physics, Chemistry and English)

Summer
2002

Software Engineering (CSE 403)
University of British Columbia, Computer Science
Undergraduate Teaching Assistant for Andrew Warfield

RESEARCH ADVISEES AND INTERNS

2019   Qian Yang (Carnegie Mellon University, *PhD Thesis Committee*)

2018   Rafal Kocielnik (University of Washington, *MSR Intern*)

2017   Tongshuang Sherry Wu (University of Washington, *MSR Intern*)

2016   Joseph Chee Chang (Carnegie Mellon University, *MSR Intern*)

2016   William McGrath (Stanford University, *MSR Intern*)

2016   Donghao Ren (University of California, Santa Barbara, *MSR Intern*)

2016   Patricia Popp (*MSR Highschool Intern*)

2016   Zoe Lawrence (*MSR Highschool Intern*)

2015   Donghao Ren (University of California, Santa Barbara, *MSR Intern*)

2015   Biye Jiang (University of California, Berkeley, *MSR Intern*)

2015	Jian Zhao (University of Toronto, *MSR Intern*)
2014	Michael Brooks (University of Washington, *MSR Intern*)
2014	Beom-Seok Oh (Yonsei University, *MSR Intern*)
2013	Todd Kulesza (Oregon State University, *MSR Intern*)

REFEREED ARTICLES

[P.32] **Amershi, S.**, Weld, D., Vorvoreanu, M., Fourney, A., Nushi, B., Collisson, P., Suh, J., Iqbal, S. T., Bennett, P., Inkpen, K., Teevan, J., Kikin-Gil, R., and Horvitz, E. (2019) Guidelines for Human-AI Interaction. To Appear in the *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2019). (Acceptance rate: 23.8%)

[P.31] Kocielnik, R., **Amershi, S.**, Bennett, P. (2019) Will You Accept an Imperfect AI? Exploring Designs for Adjusting End-User Expectations of AI Systems. To Appear in the *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2019). (Acceptance rate: 23.8%)

[P.30] Yang, Q., Cranshaw, J., **Amershi, S.**, Iqbal, S. T., and Teevan, J. (2019) Sketching NLP: A Case Study of Exploring the Right Things to Design with Language Intelligence. To Appear in the *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2019). (Acceptance rate: 23.8%)

[P.29] **Amershi, S.**, Begel, A., Bird, C., DeLine, R., Gall, H., Kamar, E., Nagappan, N., Nushi, B., and Zimmermann, T. (2019) Software Engineering for Machine Learning: A Case Study. To Appear in the *Proceedings of the ACM/IEEE International Conference on Software Engineering* (ICSE 2019). (Acceptance rate: 22%)

[P.28] Chang, J. C., **Amershi, S.**, and Kamar, E. (2017) Revolt: Collaborative Crowdsourcing for Labeling Machine Learning Datasets. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2017), pp. 2334-2346. (Acceptance rate: 25%)

[P.27] Huang, T. K., Li, L., Vartanian, A., **Amershi, S.**, and Zhu, J. (2016) Active Learning with Oracle Epiphany. *Proceedings of Neural Information Processing Systems* (NIPS 2016). (Acceptance rate: 23%)

[P.26] Ren, D., **Amershi, S.**, Lee, B., Suh, J., and Williams, J. D. (2016) Squares: Supporting Interactive Performance Analysis for Multiclass Classifiers. *IEEE Transactions on Visualization and Computer Graphics (TVCG), Visual Analytics Science and Technology* (VAST 2016). (Acceptance rate: 21%)

[P.25] Toutanova, K., Brockett, C., Tran, K. M., and **Amershi, S.** (2016) A Dataset and Evaluation Metrics for Abstractive Sentence and Paragraph Compression. *Proceedings of the International Conference on Empirical Methods in Natural Language Processing* (EMNLP 2016).

[P.24] Suh, J., Zhu, J., and **Amershi, S.** (2016) The Label Complexity of Mixed-Initiative Classifier Training. *Proceedings of the International Conference on Machine Learning* (ICML 2016). (Acceptance rate: 24%)

[P.23] Brooks, M., **Amershi, S.**, Lee, B., Drucker, S., Kapoor, A., and Simard, P. (2015) FeatureInsight: Visual Support for Error-Driven Feature Ideation in Text Classification. *Proceedings of the IEEE Conference on Visual Analytics Science & Technology* (VAST 2015).

[P.22] **Amershi, S.**, Chickering, M., Drucker, S., Lee, B., Simard, P., and Suh, J. (2015) ModelTracker: Redesigning Performance Analysis Tools for Machine Learning. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2015), pp. 337-346. (Acceptance rate: 23%)

[P.21]	**Amershi, S.**, Cakmak, M., Knox, W.B., and Kulesza, T. (Winter 2014) Power to the People: The Role of Humans in Interactive Machine Learning. *AI Magazine* 35 (4) pp. 105-120.
[P.20] *Best Paper Winner*	Kulesza, T., **Amershi, S.**, Caruana, R., Fisher, D., and Charles, D. (2014) Structured Labeling to Facilitate Concept Evolution in Machine Learning. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2014), pp. 3075-3084. (Acceptance rate: 23%)
[P.19]	**Amershi, S.**, Mahmud, J., Nichols, J., Lau, T. and Ruiz, G.A. (2013) LiveAction: Automating Web Task Model Generation. *ACM Transactions on Interactive Intelligent Systems* (TiiS) 3 (3) pp. 14:1-14:23.
[P.18]	**Amershi, S.**, Fogarty, J. and Weld, D.S. (2012) ReGroup: Interactive Machine Learning for On-Demand Group Creation in Social Networks. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2012), pp. 21-30. (Acceptance rate: 23%)
[P.17] *Invited Paper*	**Amershi, S.**, Lee, B., Kapoor, A., Mahajan, R. and Christian, B. (2011) Human-Guided Machine Learning for Fast and Accurate Network Alarm Triage. *Proceedings of the International Joint Conference on Artificial Intelligence* (IJCAI 2011), Best Papers from Sister Conferences Track, pp. 2564-2569.
[P.16]	**Amershi, S.**, Fogarty, J., Kapoor, A. and Tan, D. (2011) Effective End-User Interaction with Machine Learning. *Proceedings of the AAAI Conference on Artificial Intelligence* (AAAI 2011), Nectar Track, pp. 1529-1532. (Acceptance rate: 31%)
[P.15] *Best Paper Nominee*	**Amershi, S.**, Lee, B., Kapoor, A., Mahajan, R. and Christian, B. (2011) CueT: Human-Guided Fast and Accurate Network Alarm Triage. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2011), pp. 157-166. (Acceptance rate: 25%)
[P.14]	Chen, J., **Amershi, S.**, Dhananjay, A. and Lakshmi, S. (2010) Comparing Web Interaction Models in Developing Regions. *Proceedings of the ACM Symposium on Computing for Development* (DEV 2010). (Acceptance rate: 44%)
[P.13]	**Amershi, S.**, Fogarty, J., Kapoor, A. and Tan, D. (2010) Examining Multiple Potential Models in End-User Interactive Concept Learning. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2010), pp. 1357-1360. (Acceptance rate: 22%)
[P.12]	**Amershi, S.** and Conati. C. (2010) Automatic Recognition of Learner Types in Exploratory Learning Environments. *Handbook of Educational Data Mining, Chapter 15.* Data Mining and Knowledge Discovery Series (eds. R. Cohen and V. Kumar), Chapman & Hall/CRC Press.
[P.11] *Best Paper Nominee*	**Amershi, S.**, Morris, M. R., Moraveji, N., Balakrishnan, R., and Toyama, K. (2010) Multiple Mouse Text Entry for Single-Display Groupware. *Proceeding of the ACM Conference on Computer Supported Cooperative Work* (CSCW 2010), pp. 169-178. (Acceptance rate: 20%)
[P.10]	**Amershi, S.**, Fogarty, J., Kapoor, A. and Tan, D. (2009) Overview-Based Examples Selection in Mixed-Initiative Interactive Concept Learning. *Proceeding of the ACM Symposium on User Interface Software and Technology* (UIST 2009), pp. 247-256. (Acceptance rate: 17%)
[P.9]	**Amershi, S.** and Conati, C. (2009) Combining Unsupervised and Supervised Machine Learning to Build User Models for Exploratory Learning Environments. *The Journal of Educational Data Mining 1,* 2 (Fall 2009).
[P.8] *Best Paper Nominee*	Hoffmann, R., **Amershi, S.**, Patel, K., Wu, F., Fogarty, J., and Weld, D.S. (2009) Amplifying Community Content Creation with Mixed-Initiative Information Extraction. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2009), pp. 1849-1858. (Acceptance rate: 24%)

[P.7]   Weld, D.S., Wu, F., Adar, E., **Amershi, S.**, Fogarty, J., Hoffmann, R., Patel, K., and Skinner, M. (2008) Intelligence in Wikipedia. *Proceedings of the AAAI Conference on Artificial Intelligence* (AAAI 08), Senior Papers Track, pp. 1609-1614. (Acceptance rate: 40%)

[P.6]   **Amershi, S.** and Morris, M.R. (2008) CoSearch: A System for Co-located Collaborative Web Search. *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI 2008), pp. 1647-1656. (Acceptance rate: 22%)

[P.5]   **Amershi, S.**, Carenini, G., Conati, C., Mackworth, A., and Poole, D. (2008) Pedagogy and Usability in Interactive Algorithm Visualizations - Designing and Evaluating CIspace. *Interacting with Computers - The Interdisciplinary Journal of Human-Computer Interaction 20* (1): pp. 64-96.

[P.4]   Conati, C., Merten, C., **Amershi, S.**, and Muldner, K. (2007) Using Eye-tracking Data for High-Level User Modeling in Adaptive Interfaces. *Proceedings of the AAAI Conference on Artificial Intelligence* (AAAI 07), Nectar Track pp. 1614-1617. (Acceptance rate: 17%)

[P.3]   **Amershi, S.** and Conati, C. (2007) Unsupervised and Supervised Machine Learning in User Modeling for Intelligent Learning Environments. *Proceedings of the ACM/SIGCHI Conference on Intelligent User Interfaces* (IUI 2007), pp. 72-81. (Acceptance rate: 22%)

[P.2]   **Amershi, S.** and Conati, C. (2006) Automatic Recognition of Learner Groups in Exploratory Learning Environments. *Proceedings of Intelligent Tutoring Systems* (ITS 2006), pp. 463-472. (Acceptance rate: 32%)

[P.1]   **Amershi, S.**, Arksey, N., Carenini, G., Conati, C., Mackworth, A., Maclaren, H., and Poole, D. (2005) Designing CIspace: Pedagogy and Usability in a Learning Environment for AI. *Proceedings of the ACM/SIGCSE Conference on Innovation and Technology in Computer Science Education* (ITiCSE 2005), pp. 178-182. (Acceptance rate: 33%)

REFEREED WORKSHOP PAPERS

[W.5]   **Amershi, S.** and Fogarty, J. (2012) Designing for Effective End-User Interactive Machine Learning. *The ACM Conference on Human Factors in Computing Systems Workshop on End-User Interactions with Intelligent and Autonomous Systems* (CHI 2012).

[W.4]   **Amershi, S.** (2011) Designing for Effective End-User Interaction with Machine Learning. *The ACM Symposium on User Interface Software and Technology Doctoral Symposium* (UIST 2011).

[W.3]   **Amershi, S.** and Morris, M.R. (2008) CoSearch: Leveraging Multiple Devices to Enhance Collaboration in Resource-Constrained Environments. *The ACM Conference on Human Factors in Computing Systems Workshop on HCI for Community and International Development* (CHI 2008).

[W.2]   Morris, M.R. and **Amershi, S.** (2008) Shared Sensemaking: Enhancing the Value of Collaborative Web Search Tools. *The ACM Conference on Human Factors in Computing Systems Workshop on Sensemaking* (CHI 2008).

[W.1]   **Amershi, S.**, Conati, C. and Maclaren, H. (2006) Using Feature Selection and Unsupervised Clustering to Identify Affective Expressions in Educational Games. In Proceedings of *The Intelligent Tutoring Systems Workshop on Motivational and Affective Issues* (ITS 2006), pp. 21-28.

TECHNICAL REPORTS, REFEREED DEMOS, AND REFEREED POSTERS

[D.7]   Simard, P., **Amershi, S.**, Chickering, M., Pelton, A. E., Ghorashi, S., Meek, C., Ramos, G., Suh, J., Verwey, J., Wang, M., and Wernsing, J. (2017) Machine Teaching: A New Paradigm for Building Machine Learning Systems. arXiv:1707.06742 [cs.LG], Microsoft Research MSR-TR-2017-26.

[D.6]   Simard, P., Chickering, M., Lakshmiratan, A., Garcia Jurado Suarez, C., **Amershi, S.**, Verwey, J., and Suh, J. (2014) ICE: Interactive Classification and Entity Extraction. *Neural Information Processing Systems Demonstrations* (NIPS 2014).

[D.5]   Simard, P., Chickering, M., Lakshmiratan, A., Charles, D., Bottou, L., Garcia Jurado Suarez, C., Grangier, D., **Amershi, S.**, Verwey, J., and Suh, J. (2014) ICE: Enabling Non-Experts to Build Models Interactively for Large-Scale Lopsided Problems. arXiv:1409.4814 [cs.AI], Microsoft Research 2014.

[D.4]   **Amershi, S.**, Fogarty, J., Kapoor, A., and Tan, D. (2009) Designing for End-User Interactive Concept Learning in CueFlik. *Workshop on Analysis and Design of Algorithms for Interactive Machine Learning at NIPS 2009* (ADA-IML at NIPS 2009).

[D.3]   **Amershi, S.** and Morris, M.R. (2009) Co-located Collaborative Web Search: Understanding Status Quo Practices. *Human Factors in Computing Systems – Extended Abstracts* (CHI 2009).

[D.2]   Hoffmann, R., **Amershi, S.**, Patel, K., Wu, F., Fogarty, J., and Weld, D.S. (2008) Amplifying Community Content Creation with Mixed-Initiative Information Extraction. *The ACM Symposium on User Interface Software and Technology* (UIST 2008).

[D.1]   **Amershi, S.**, Morris, M.R. (2009) CoSearch: A System for Co-located Collaborative Web Search. *Microsoft Research's TechFest* (TechFest 2008).

PATENTS

[T.13]   **Amershi, S.**, Drucker, S., Lee, B., Simard, P., Lakshmiratan, A., Suarez, C.G.J., Charles, D., Grangier, D., and Chickering, M. (2018) Interactive Visualization of Machine-Learning Performance. U.S. Patent No. 9886669.

[T.12]   **Amershi, S.**, Brooks, M., Drucker, S., Lee, B., Simard, P., Suh, J., and Kapoor, A. (2018) Error-Driven Feature Ideation in Machine Learning. U.S. Patent No. 10068185.

[T.11]   Simard, P., Chickering, M., Bottou, L., Charles, D., Lakshmiratan, A., Suarez, C.G.J., Grangier, D., and **Amershi, S.** (2016) Interactive Segment Extraction in Computer-Human Interactive Learning. U.S. Patent No. 9489373.

[T.10]   Simard, P., Grangier, D., Chickering, M., and **Amershi, S.** (2016) Active Featuring in Computer-Human Interactive Learning. U.S. Patent No. 9430460.

[T.9]   **Amershi, S.**, Ren, D., Lee, B., Suh, J., and Williams, J. (2016) Interactive Performance Visualization of Multi-Class Classifiers. Pending.

[T.8]   Teevan, J., Iqbal, S., Liebling, D., Choudhury, P., Paradiso, A., Gehring, D., Gruen, R., Carbary, T., Kamar, E., **Amershi, S.**, Toutanova, K. (2016) Providing Rewards and Metrics for Completion of Microtasks. Pending.

[T.7]   Lee, B., Kapoor, A., Mahajan, R., Christian, B., and **Amershi, S.** (2015) Classification of Stream-Based Data Using Machine Learning. U.S. Patent No. 9122995.

[T.6]   Simard, P., Grangier, D., Bottou, L., **Amershi, S.**, and Lakshmiratan, A. (2013) Interactive Concept Editing in Computer-Human Interactive Learning. Pending.

[T.5]   **Amershi, S.**, Kulesza, T., Caruana, R., Charles, D., and Fisher, D. (2013) Structured Labeling to Facilitate Concept Evolution in Machine Learning. Pending.

[T.4]   **Amershi, S.**, Lau, T.A., Mahmud, J.U., and Nichols, J.W. (2011) Automated Web Task Procedures Based on an Analysis of Actions in Web Browsing History Logs. Pending.

[T.3]   Morris, M.R., **Amershi, S.**, Moraveji, N., and Balakrishnan, R. (2009) Multiple Mouse Character Entry. Pending.

[T.2]   **Amershi, S.** and Morris, M.R. (2009) System and Interface for Co-located Collaborative Web Search. U.S. Patent No. 8266139.

[T.1]   Morris, M.R., Teevan, J., **Amershi, S.**, and Mickens, J. (2008) Using Related Users' Data to Enhance Web Search. U.S. Patent No. 8244721.

INVITED TALKS AND INTERVIEWS

Feb. 2018	*Human-Driven Machine Learning with Saleema Amershi*, Data Stories Podcast. http://datastori.es/115-human-driven-machine-learning-with-saleema-amershi/
April 2017	*Making People Better at Machine Learning*, Pacific Northwest National Laboratory
Dec. 2016	*Better Machine Learning Through Data*, NIPS 2016 Workshop on Interpretable Machine Learning for Complex Systems
Aug. 2016	*Better Machine Learning Through Data*, KDD 2016 Workshop on Interactive Data Exploration and Analytics (IDEA) Keynote
Feb. 2015	*Towards Usable Machine Learning,* Stanford University
Feb. 2015	*Towards Usable Machine Learning*, University of Washington
Feb. 2015	*Towards Usable Machine Learning,* University of Rochester (Remote)
Oct. 2013	*Designing for Effective End-User Interaction with Machine Learning,* MIT
April 2012	*Designing for Effective End-User Interaction with Machine Learning,* Adobe Systems
April 2012	*Designing for Effective End-User Interaction with Machine Learning,* IBM Research Almaden
March 2012	*Designing for Effective End-User Interaction with Machine Learning,* Google Research
March 2012	*Designing for Effective End-User Interaction with Machine Learning,* Microsoft Research
July 2011	*Designing for Effective End-User Interaction with Machine Learning,* FX Palo Alto Laboratory

SELECTED PRESS

[S.7]	Guidelines for human-AI Interaction design. *Microsoft Research Blog,* Feb 2019.
[S.6]	AI's big leap to tiny devices opens world of possibilities. *Microsoft Research Blog*, June 2017. https://blogs.microsoft.com/ai/ais-big-leap-tiny-devices-opens-world-possibilities/
[S.5]	Microsoft made its AI work on a $10 Raspberry Pi. *Engadget*, June 2017. https://www.engadget.com/2017/06/30/microsoft-made-its-ai-work-on-a-10-raspberry-pi/

[S.4]   Microsoft manages to cram artificial intelligence on the Raspberry Pi 3 PC board. *Digital Trends*, June 2017.
https://www.digitaltrends.com/computing/artificial-intelligence-raspberry-pi-microsoft/

[S.3]   Searching as a Team. *MIT Technology Review*, March 2008.
http://www.technologyreview.com/Infotech/20405/?nlid=936&a=f

[S.2]   Microsoft Research Shows New Search Projects. *Seattle Post-Intelligencer*, March 2008.
http://blog.seattlepi.nwsource.com/microsoft/archives/133413.asp

[S.1]   Microsoft Shows Off Collaborative Search Tools. *InfoWorld*, March 2008.
http://www.infoworld.com/article/08/03/04/Microsoft-shows-off-collaborative-search-tools_1.html

HONORS AND AWARDS

2016	Invited to National Academy of Engineering, Frontiers of Engineering (US FOE)
2014	Best Paper Award Winner, CHI 2014
2013	Distinguished Dissertation Award, University of Washington 2013
2011	Invited Paper, IJCAI 2011, Invited as Best of CHI 2011
	Best Paper Nominee, CHI 2011
	Kumar & Roberta L. Bhasin Endowed Fellowship Recipient, Academic Fellowship
2010	Best Paper Nominee, CSCW 2010
	Facebook Fellowship Finalist, Institutional Fellowship
	Microsoft Research PhD Fellowship Finalist, Institutional Fellowship
2009	Google Anita Borg Scholarship Recipient, National Research Award
	Best Paper Nominee, CHI 2009
2007	Microsoft Endowed Fellowship, Institutional Fellowship
2005	University Graduate Fellowship, Academic Fellowship
2003, 2004	NSERC Undergraduate Research Award, National Research Award