

SWATI MISHRA

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EDUCATION

Ph.D. Information Science , Cornell University, USA.	2018 - 2023
M.Sc. Computer Science , Cornell University, USA.	2019 - 2021
M.Sc. Human Computer Interaction , Indiana University, USA.	2016 - 2018
B. Tech. Electronics and Communication Engineering , Dr. APJ Abdul Kalam TU, India.	2005 - 2009

PUBLICATIONS

- *Teachable Filters: A framework of Interactive Machine Teaching for Information Filtering*. **Mishra S.**, Ryerkerk M, Lockerman Y, Eis D. and Rzeszotarski J. (AAAI ICWSM 2023) [Under Submission]
- *Expectations and Perceptions of Learning in Machine Teaching Interfaces*. **Mishra S.**, Rzeszotarski J. (ACM IUI 2023) [Under Review]
- *Designing Interactive tools for Transfer Learning for ML Non-experts*. **Mishra, S.**, Rzeszotarski J. ACM Conference on Human Factors in Computing Systems (ACM CHI 2021) **Best Paper**
- *Crowdsourcing and Evaluating Concept-driven Explanations of ML Models*. **Mishra, S.** Rzeszotarski J. ACM Conference on Computer Supported Cooperative Work. (ACM CSCW 2021)
- *Towards Natural Language Interactions for Qualitative Text Analysis*. **Mishra. S.**, Rzeszotarski J. Workshop on Artificial Intelligence for HCI: A Modern Approach ACM Conference on Human Factors in Computing Systems (ACM CHI 2020)
- *Concept-Driven Visual Analytics: an Exploratory Study of Model- and Hypothesis-Based Reasoning with Visualizations*. Choi, I., Childers, T., Raveendranath, N., **Mishra, S.**, Harris, K, Reda, K. ACM Conference on Human Factors in Computing Systems (ACM CHI 2019)
- *Toward Concept Driven Visual Analytics*. Choi, I., **Mishra, S.**, Harris, K., Raveendranath, N., Childers, T., Reda, K. IEEE Visualization Conference (IEEE VIS 2018)
- *Full Body Interaction Beyond Fun: Engaging Museum Visitors in Human-Data Interaction*. **Mishra, S.**, Cafaro, F. ACM Conference on Tangible, Embedded, and Embodied Interaction (ACM TEI 2018)
- *Advanced Algorithms for Micro Mouse Maze Solving*. **Mishra, S.**, Bande, P., International Conference on Embedded Systems & Applications. (ICESM 2009)
- *Mobile controlled smart device for multiple device regulation*. Tohan, N., **Mishra, S.**, Bande, P., Henry, R., International Conference on Recent Advances in Material Processing Technology. (2009)
- *Maze solving algorithms for Micro Mouse Maze*. **Mishra, S.**, Bande, P., IEEE Conference on Signal Image Technology and Internet Systems (IEEE SITIS 2008)

RESEARCH AND PROFESSIONAL EXPERIENCE (8+ YEARS)

AI Intern, Journalism AI Group, Bloomberg, USA <i>Advisors:</i> Matt Ryerkerk, Yitzchak Lockerman	May 2022 - Aug 2022
AI Scientist Intern, Healthcare Emerging Technologies Group, IQVIA, USA <i>Advisor:</i> Barry Ahrens	May 2021 - Aug 2021
Graduate Research Assistant, Human Centered-Computing Computing and Information Science, Cornell University, USA <i>Advisors:</i> Jeff Rzeszotarski, David Mimno, Claire Cardie	Aug 2018 - May 2021
Product Design Intern, Healthcare Knowledge Engineering Labs, Indiana, USA <i>Advisor:</i> Thomas D. Feigenbaum	May 2017 - Aug 2017
Research Assistant, Human Centered-Computing School of Informatics and Computing, Indiana University, USA <i>Advisors:</i> Khairi Reda, Francesco Cafaro	Aug 2016 - May 2018
Module Team Lead, Advanced Drivers Assistance Systems Continental AG Research and Development Center, India <i>Product:</i> Cross Traffic Alert System	Jun 2015 - Jul 2016
Specialist Engineer, Advanced Drivers Assistance Systems Mando Research and Development Center, India <i>Product:</i> Pedestrian Detection System	Oct 2012 - May 2015
Technical Consultant, Embedded Systems Purple Leap, Pearson - Educomp JV, India <i>Mentor:</i> Pankaj Bande	Aug 2011 - Sep 2012
Systems Engineer, Embedded Systems Infosys Technologies Pvt. Ltd. India <i>Product:</i> Emergency Call System for Vehicle Crash	Jan 2010 - Aug 2011
Research Assistant, Embedded Systems Laboratories for Applied Research in Electronics, India <i>Mentor:</i> Manish Patil	Jun 2009 - Dec 2009

TEACHING EXPERIENCE

INFO 3300 Data-driven Web Applications	FALL 2022 and FALL 2019
INFO 4310 Interactive Information Visualization	SPRING 2022
CS 1300 Introductory Design and Programming for the Web	FALL 2020
INFO 4320 Introduction to Rapid Prototyping and Physical Computing	SPRING 2019

SKILLS

Software Skills: C/C++, Python(nltk, sklearn, pytorch, keras, bokeh, tensorflow), Javascript/D3, SQL

Data Domains: Computer Vision, Natural Language Processing.

Hardware Skills: Graphics Processor(GPU), Digital Signal Processor(DSP), Embedded Engine(EVE).

AWARDS AND GRANTS

- Bloomberg PhD Data Science Fellowship 2022 - 23
- Contribution to Multi-Investigator Research Project Grant - Weil Cornell and Information Science
- Cornell Information Outstanding Service Award 2021-22
- Bloomberg PhD Data Science Fellowship 2021 - 22
- Best Paper Award at CHI 2021, Yokohama, Japan.
- Cornell University Graduate Fellowship Award 2018 - 2019
- Contribution to NSF Eager Grant Aiding Reasoning about Correlation and Causation #1848898
- Contribution NSF CRII Grant Concept-Driven Visual Analysis #1755611
- Indiana University Non- Resident Graduate Scholarship Award 2017-18
- Indiana University Non- Resident Graduate Scholarship Award 2016-17
- Richard Tapia Diversity in Computing Conference Travel Award 2017
- Grace Hopper Celebration of Women in Computing Conference Travel Grant 2017
- Mando Korea (South) Outstanding Contribution Award 2015
- Mando Korea (South) Outstanding Paper Presentation Award 2014

INVITED TALKS

Machine Teaching: Towards Sustainable AI

Bloomberg AI Seminar 2021 & 2022

Designing Machine Teaching tools for Journalists

Computational Journalism Conference (C+J), Columbia University 2022

Towards AI Assisted healthcare

AI Seminar at the Emerging Technologies Group IQVIA 2021

Designing Interactive tools for Transfer Learning for ML Non-experts

Invited Talk at ACM SIGCHI 2021

Crowdsourcing and Evaluating Concept-driven Explanations of ML Models

Invited Talk at ACM CSCW 2021

Explainable AI

Cornell University Information Science Seminar 2019

NEWS FEATURES

Cornell Graduate School News 2022

Bloomberg AI News 2022 - Research Spotlight

Research Spotlight in Cornell Alumni Newsletter 2021

AI for Healthcare ICT Moscow Press 2021

IQVIA Intern spotlight on Outstanding Researcher 2021

SERVICE

Paper Reviewer

CHI 2019 - Present
DIS 2020 - Present
CSCW 2020 - Present
TEI 2018 - Present
NeurIPS 2021 - Present
IUI 2020 - Present

Department Service

Cornell Information Science Colloquium Organizer 2019-2020
IS Graduate Student Administration Representative 2020-2021
Faculty Hiring Representative Cornell IS 2021-2022

Outreach Workshops Designed and Delivered

Micro-Processor Programming Fundamentals, Greater Noida, India, Jun-July 2008
Embedded Programming, Jorhat Engineering College, Guwahati, India. Jun 2009
C Programming Fundamentals, Jorhat Engineering College, Guwahati, India Jul 2009
Working with Sensors, Multi-College Event, Bhopal, India Sept 2009
Applications in Computer Vision, Army Institute of Technology, Pune, India Sept 2009
Embedded Systems Design, Multi-College Event, Mumbai, India Oct 2009
Programming and Computer Vision, Pune Engineering College, Pune, India Nov 2009
Embedded Software Design Studio, Multi-College Event, Bangalore, India Oct 2011
Designing Everyday Technologies, Multi-College Event, Hyderabad, India Mar 2012
Embedded Systems Design, BBD College, Lucknow, India May-Jun 2012
Computer Vision Programming, BBD College, Lucknow, India Jul 2012

GRADUATE LEVEL COURSEWORK

CS 5740 Natural Language Processing
CS 6320 Database Systems
CS 6740 Advanced Language Technologies
CS 6741 Natural Language Processing and Machine Learning
HD 6610 Text and Networks
INFO 6610 Computational Methods in IS Research
INFO 6240 Sensemaking
INFO 6310 Behavior and Information Technology