Abstract

Artificial intelligence is revolutionizing work, including what it means for cooperative work to be supported by computers. The increased use of AI in CSCW can lead to many advantages, including increased productivity and efficiency, but it can also include several potential ethical trade-offs, such as invasions of privacy, loss of autonomy, and job displacement. This workshop will explore the ethical dimensions of AI in CSCW, building on Good Systems, a UT Grand Challenge. Specifically, the first half of the workshop will focus on the need to design AI to work for all users and to avoid bias through the use of universal design as well as the need for AI and CSCW researchers to interact with policy and legal experts to work together to ensure that AI will be developed in an ethical manner with sufficient consideration of its societal implications, and also that AI will be regulated and legislated in ways that will maximize its benefits to all people.

Author Keywords
Artificial intelligence; machine learning; automation; work; universal design; policy; ethics; human values.

ACM Classification Keywords
• Security and privacy / Social aspects of security and privacy • Social and professional topics / Codes of ethics • Social and professional topics / Computing / technology policy

Description of the Theme of the Workshop

Depending on the source of the information, one might conclude either that AI is the salvation of humanity, or that it is the root cause that will lead to our destruction. Kranzberg’s [13] first law of technology states that “technology is neither good nor bad, nor is it neutral.” Similarly, AI is neither good nor bad, nor is it neutral.
The impacts of AI are determined by context, including how it is designed and used. AI designed by certain people in a certain way may be good for certain people under certain circumstances using it in a particular way, but bad for other people under different circumstances using it in a different way.

Specifically, we build upon several research threads within the CSCW community. The overarching framing of this workshop will be the tradition of value-sensitive design. Value-sensitive design research in CSCW has explored methods for studying values in computing [23] and research ethics practices [27]; values such as privacy [6], security [24], personalization [19], accuracy [5,14], and love [3]; and communities such as different national cultures [1], subcultures [8], social classes [4], and communities [17]. We welcome participation by researchers interested in any of these topics within the context of AI.

At the micro-level, we frame the workshop around the concepts of universal design and bias mitigation. It is critical that AI is designed to work for all users. Universal design research in CSCW has considered populations such as children with Autism Spectrum Disorder [20], older adults with dementia [9], individuals with mobility impairments [16], individuals with neuromuscular diseases [11], and individuals with visual impairments [7]. In terms of bias mitigation, research in CSCW has explored a range of forms of bias, including ethnic bias [2], gender bias [21,25], geographical bias [20], and political bias [15].

At the macro-level, we frame the workshop around policy and legal issues. It is critical that society is proactive rather than reactive in relation to the challenges potentially posed by AI, as waiting to see the societal consequences of AI deployment before acting afterwards could be potentially disastrous. Research in CSCW has explored policy in relation to the wireless spectrum [29], local crisis infrastructure [10], and groupware [18]. It has also explored legal considerations such as copyright law [12] and privacy protections [26,28].

**Workshop Activities, Goals, and Recruitment**

The goals of this one-day workshop are to generate ideas and build community around ethical issues related to the use of AI in CSCW research and practice. Specifically, we divide this space into two parts, the individual level and the societal level. The morning will focus on the individual level, specifically on the universal design of AI to respect users’ needs, values, abilities, and autonomy. The afternoon will focus on the societal level, specifically on the need to bring together policy, legal, and AI experts to mutually constitute both technologies and policies that will benefit society and avoid potential downsides of automation such as worker displacement, bias, and loss of autonomy.

For each part, we will begin with lightning talks both by the workshop organizers as well as by workshop participants. We will then engage in interactive activities in small groups to identify problems related to the ethics of AI in CSCW at the respective scale, as well as solutions to these problems. Groups will then report out their findings, we will do a thematic sorting to identify common themes across groups, and we will end each half with a full workshop discussion of the themes identified, leading to the development of a research program for tackling these key problems.
We will recruit participants by posting a call for participation via relevant listservs and via social media. We anticipate approximately 50-75 participants. We will explicitly seek participation from researchers and practitioners across the field of CSCW. We will need a projector; we will bring all other equipment & supplies.

**Organizers**

Kenneth R. Fleischmann is a professor in the School of Information at the University of Texas at Austin. He holds a B.A. in Computer Science and Anthropology from Case Western Reserve University and a M.S. and Ph.D. in Science and Technology Studies from Rensselaer Polytechnic Institute. His research focuses on the role of human values in the design and use of information technologies, with a particular emphasis on the ethics of AI. He serves as the Inaugural Chair of the Executive Team for the Good Systems Grand Challenge Initiative at UT, and his current funded projects include serving as PI of “Field Research with Policy, Legal, and Technological Experts about Transparency, Trust, and Agency in Machine Learning” funded by Cisco Research Center; Co-PI of “Microsoft Ability Initiative” funded by Microsoft Research; and Co-PI of “Tackling Misinformation Through Socially Responsible AI” funded by Micron Foundation.

Sherri R. Greenberg is a clinical professor and Fellow of the Max Sherman Chair in State and Local Government at the LBJ School of Public Affairs at The University of Texas at Austin. Also, she is a senior adviser to Austin Mayor Steve Adler. She served for 10 years as a member of the Texas House of Representatives. She chaired the House Pensions and Investments Committee and the Select Committee on Teacher Health Insurance. She served as the manager of capital finance for the City of Austin and has also worked at Standard & Poor’s. She received an M.Sc. in Public Administration and Public Policy from the London School of Economics and a B.A. in Government from The University of Texas at Austin. Her teaching and research interests include housing, transit, health care, finance, innovation, and engagement.

Danna Gurari is an assistant professor in the School of Information at The University of Texas at Austin. Her research interests span computer vision, human computation, crowdsourcing, machine learning, and accessibility, with a focus on designing visual analysis systems that improve people’s quality of life. She completed a postdoctoral fellowship in Computer Science at UT-Austin in 2017, PhD in Computer Science at Boston University in 2015, and MS in Computer Science and BS in Biomedical Engineering at Washington University in St. Louis in 2005. She worked in industry from 2005-2010 at Boulder Imaging and Raytheon. She was recognized with the Researcher Excellence Award from the Boston University CS department in 2015 as well as with her collaborators for a 2017 Honorable Mention Award at CHI, 2014 Best Paper Award for Innovative Idea at MICCAI IMIC, and 2013 Best Paper Award at WACV.

Abigale Stangl is a Postdoctoral Research Fellow in the School of Information at the University of Texas at Austin. She holds a B.ENVD in Planning, a M.S. in Information Communication Technology for Development, and a Ph.D. in Technology Media and Society from the University of Colorado-Boulder. Her research is focused on the design of vision to touch and vision to language information technologies that make graphical information accessible to people who are blind.
and have low vision, as well as the study of multi-modal information literacy education. She has received a Rotary International Ambassadorial Scholarship and two CU-Boulder Chancellor’s Awards for Excellence in STEM Education.

Nitin Verma is a doctoral student at the School of Information at the University of Texas at Austin. He holds an M.S. in Information Studies from the University of Texas at Austin, an M.Sc. in Informatics, and a B.Sc. in Electronic Science from the University of Delhi, India. His research focuses on misinformation with an emphasis on studying the relationship between human values, knowledge formation, language, and communication.

Jaxsen R. Day is a doctoral student at the School of Information at The University of Texas at Austin. He holds a M.Ed. in Management of Technical Education and a B.B.A. in Computer Information Systems from Texas State University. His primary interest lies in exploring accessibility as it relates to usability, education, employment, and emerging assistive technologies.

Rachel N. Simons is an assistant professor in the School of Library and Information Studies at Texas Woman’s University. She holds a Ph.D. in Information Studies from the University of Texas at Austin and a M.A. and B.A. in Comparative Literature from the University of Georgia. Her research centers on diversity and ethics issues in both the design and use of information and communication technologies, with a particular emphasis on critical gender studies and feminist technology studies.

Tom Yeh is an Assistant Professor in the Department of Computer Science at the University of Colorado Boulder. He holds a B.Sc. in Computer Science from the Simon Fraser University and a M.S. and a Ph.D. in Computer Science from the Massachusetts Institute of Technology. His research focuses on accessibility and ethics, especially issues impacting young children. He serves as a member on the ACM Committee on Professional Ethics. His current funded projects include serving as PI of “Designing Tactile Picture Books: Critical Making in Libraries to Broaden Participation in STEM Education and Careers,” “Adaptive Tactile Picture Books for Blind Children during Emergent Literacy,” and “Integrating Ethics into Robotic Learning Experiences”, all funded by the National Science Foundation.

References


