Unveiling AI-Driven Collective Action for a Worker Centric Future

Saiph Savage
Northeastern University & Universidad Nacional Autonoma de Mexico (UNAM) Boston, MA, USA & Mexico City, Mexico
S.Savage@northeastern.edu

ABSTRACT

Collective action by gig knowledge workers is a potent method for enhancing labor conditions on platforms like Upwork, Amazon Mechanical Turk, and Toloka. However, this type of collective action is still rare today. Existing systems for supporting collective action are inadequate for workers to identify and understand their different workplace problems, plan effective solutions, and put the solutions into action. This talk will discuss how with my research lab we are creating worker-centric AI enhanced technologies that enable collective action among gig knowledge workers. Building solid AI enhanced technologies to enable gig worker collective action will pave the way for a fair and ethical gig economy—one with fair wages, humane working conditions, and increased job security. I will discuss how my proposed approach involves first integrating "sousveillance," a concept by Foucault, into the technologies. Sousveillance involves individuals or groups using surveillance tools to monitor and record those in positions of power. In this case, the technologies enable gig workers to monitor their workplace and their algorithmic bosses, giving them access to their own workplace data for the first time. This facilitates the first stage of collective action: problem identification. I will then discuss how we combine this data with Large-Language-Models (LLMs) and social theories to create intelligent assistants that guide workers to complete collective action via sensemaking and solution implementation.

The talk will present a set of case studies to showcase this vision of designing data driven AI technologies to power gig worker collective action. In particular, I will present the systems: 1) GigSousveillance which allows workers to monitor and collect their own job-related data, facilitating quantification of workplace problems; 2) GigSense equips workers with an AI assistant that facilitates sensemaking of their work problems, helping workers to strategically devise solutions to their challenges; 3) GigAction is an AI assistant that guides workers to implement their proposed solutions. I will discuss how we are designing and implementing these systems by adopting a participatory design approach with workers, while also conducting experiments and longitudinal deployments in the real world. I conclude by presenting a research agenda for transforming and rethinking the role of A.I. in our workplaces; and researching effective socio-technical solutions in favor of a worker-centric future and countering techno-authoritarianism.

WSDM '24, March 4–8, 2024, Merida, Mexico

ACM ISBN 979-8-4007-0371-3/24/03.
https://doi.org/10.1145/3616855.3637633

CCS Concepts/ACM Classifiers

• Human-centered computing ~Human Computer Interaction ~ Interactive Systems and Tools;

Author Keywords

gig work; HCI; CSCW; future of work; collective action; Human Centered AI.

ACM Reference Format

Saiph Savage. 2024. AI-Driven Collective Action for a Worker Centric Future. In Proceedings of the 17th ACM International Conference on Web Search and Data Mining (WSDM '24), March 4–8, 2024, Merida, Mexico. ACM, New York, NY, USA, 2 pages. https://doi.org/10.1145/3616855.3637633

BIOGRAPHY

Saiph Savage is an Assistant Professor at Northeastern University in the Khoury College of Computer Sciences, where she directs the Northeastern Civic A.I. Lab.

Impact. The impact of Dr. Savage's research has led to her being named one of the 35 innovators under 35 by the MIT Tech Review. Forbes Magazine also named her one of the 20 leaders in the field of AI in Mexico, and she was awarded large grants from the National Science Foundation (NSF). Dr. Savage enjoys recognition from UNESCO for having globally one of the most impactful AI research projects. Her work has also won paper awards at top scientific venues in human-computer interaction, including ACM CHI, CSCW, and the Web Conference. The growing public interest in Dr. Savage's research has garnered international press coverage from the BBC, New York Times, The Economist, Deutsche Welle, Vice, Wired, Forbes, and Fortune.

Leadership. Dr. Savage holds several leadership positions: She advises Federal Governments, as well as presidencies in Latin America. She also actively provides input to Senators in the US and Mexico, collaborates with US Federal Judges, the Department of Justice, as well as the Office of the Attorney General in Mexico. She is an expert member within the intergovernmental group representing OECD's Global Partnership on Artificial Intelligence (GPAI), especially AI for the future of work. Dr. Savage is a Tech Policy Research Fellow at the Center of Democracy and Technology (CDT) , and the Federation of American Scientists (FAS). she is also an Editor for ACM CSCW, Associate Chair for ACM CHI, Chair in the International Panel on the Information Environment (IPIE), which was presented in the Noble Prize Summit. She is a member of the ACM SIGCHI committee for Latin America.

Background. Dr. Saiph holds a masters and Ph.D. in Computer Science from the University of California, Santa Barbara (UCSB). She also studied Computer Engineering at the Universidad Nacional Autónoma de México (UNAM). Previously, Dr. Savage was a Google Anita Borg Scholarship Recipient, a tech worker at Intel Labs and Microsoft Bing, as well as a crowd research worker at Stanford. She has worked at Carnegie Mellon University, the University of Washington, and West Virginia University (where she designs technology for rural regions.).

ACKNOWLEDGEMENTS

This work was partially supported by the NSF CAREER award #2339443