

# Artificial intelligence (AI) literacy— A cross-disciplinary exploration

ISTAS21 Special Session on Friday October 29<sup>th</sup>, 2021, 3-4:30pm (EDT)

## **Session Presenters**

**Kem-Laurin Lubin**

*PhD Candidate, English Language & Literature  
University of Waterloo*

**Joseph Shea-Carter**

*Ph.D. Student, Literary Studies,  
School of English and Theatre Studies  
University of Guelph*

**Kathryn Harvey**

*Archivist, Archival and Special Collections,  
University of Guelph Library  
Senior Associate Editor, Archivaria*

**Asen O. Ivanov**

*Michael Ridley Postdoctoral Fellow in Digital Humanities  
University of Guelph*

## **Moderator**

**Jason Lajoie**

*ISTAS21 Organizing Chair  
University of Waterloo*

## **Scribe**

**Ethan Pike**

*University of Waterloo*

**Program Description**—This special session will foster an interdisciplinary conversation with the audience on AI literacy through a roundtable discussion consisting of archivists, digital humanists, literary scholars, and philosophers from several disciplinary backgrounds. Together, we will engage in an open conversation to address a two-part question, namely: how can scholars and the university intervene against technology systems that disproportionately marginalize or discriminate against minorities? And how can they use this intervention to simultaneously platform individuals or groups who can surface counter-narratives within critical discourse surrounding representative technology and its role within the broader fields of policy, geopolitics, and governance? Our conversation will focus on (1) the overarching ethical principles guiding collection, processing, and reuse of data; (2) algorithmic bias, including racial bias in data and discriminatory values in design; (3) the situated and relational nature of data, data practices, and data interpretation; and (4) the practical importance of equitable, open-sourced design within public and private institutions.

**Keywords**—*Social justice, artificial intelligence, algorithmic bias, marginalization*

This 90-minute special session was set up as a roundtable discussion between four panelists who set out to raise and explore some of the questions that must be asked as we move towards an AI-centred future. Panelists hailed from multiple disciplines, primarily within the humanities: Kem-Laurin Lubin is an AI bias specialist; Kathryn Harvey is an archivist; Joseph Shea-Carter is a literary scholar; and Asen Ivanov specializes in the digital humanities. Their conversation tackled the theme of “AI literacy” from several angles as the speakers introduced ideas from their respective domains of expertise and each sought to address the session’s four stated areas of focus: (1) the overarching ethical principles guiding collection, processing, and reuse of data; (2) algorithmic bias, including racial bias in data and discriminatory values in design (and its negative impacts on marginalized people); (3) the situated and relational nature of data, data practices, and data interpretation; and (4) the practical importance of equitable, opensource design within public and private institutions.

Each panelist first offered a brief opening statement, before the panel opened up to a more interactive discussion with the audience and between panelists. Lubin spoke about the wider implications of the increasing use of AI technology; specifically, she addressed how caution must be taken to avoid the negative technological outcomes we have seen with previous cases of algorithmic biases. Harvey focused on how AI intersects with her role as an archivist including the use of AI-controlled search engines. She raised important issues about how AI assigns value to data in aiding researchers, how AI will learn to deal with the bias that can be present in older historical sources, and how many archives currently exist outside the reach of AI systems (since they have not yet been fully catalogued for online searching). During his portion of the discussion, Shea-Carter also discussed how value is assigned to data, emphasizing the theme of inclusion/exclusion, asking questions such as ‘Whose history are we tending to and why?’, and cautioning against the use of terms such as ‘progress.’ And Ivanov spoke about the importance of data literacy, i.e., the ability to read, work, analyze, and argue with data as part of inquiry into the world. He discussed how data literacy can raise awareness about mundane data traces that reveal personal information including ethnicity, political affiliations, and religious beliefs.

The audience provided their share of interesting talking points to the conversation throughout the discussion. One question concerned what AI literacy looked like in the context of the university classroom or other pedagogical spaces? Ivanov answered by addressing how data literacy overlaps with other literacies that have been taught to people. Other areas of education that teach competencies surrounding how to read, work with, analyze, and argue with data are the best areas to incorporate lessons of data literacy. Lubin expanded upon the importance of teaching digital literacy as it relates to AI literacy. To teach any form of AI literacy and how it impacts people's lives, people must also be able to have a form of digital literacy. This is an important lesson to teach not only within the academic context, but it is also important for digital citizens to understand their relationship with AI systems.