Award Details

Data-intensive curation of sustainability assessments

Research Details

Competition Year:	2018	**Fiscal Year:**	2018-2019
Project Lead Name:	Becker, Christoph	**Institution:**	University of Toronto
Department:	Information, Faculty of	**Province:**	Ontario
Award Amount:	25,000	**Installment:**	1 - 1
Program:	Engage Grants Program	**Selection Committee:**	Ontario Internal Decision Committee
Research Subject:	Software engineering	**Area of Application:**	Information systems and technology
Co-Researchers:	No Co-Researcher	**Partners:**	Sustainalytics

Award Summary

Sustainability assessment services evaluate publicly listed companies for their environmental, social and governance performance. Their ratings provide crucial guidance for financial investors and help the Canadian and global economy to become more just and sustainable. To produce them, sustainability analysts rely on data-intensive automated workflows that acquire and analyze complex, heterogeneous data sources using Artificial Intelligence (AI) techniques. The results of these algorithms need to be interpreted by highly skilled analysts in a new kind of data-intensive knowledge work that fuses AI with individuals' professional and curatorial expertise and judgment in what we call 'data-intensive curation'. The quality of the resulting curated data sets informs investment-related decision making and has far-reaching impact.**This new type of data-intensive knowledge work raises challenging questions about the collaboration between experts and algorithms. The analysts' expertise and judgment are as irreplaceable as the analytic capabilities provided by AI. The trust that analysts place in an algorithmic output, and their judgment of its relevance, rely on how well they understand where it comes from. Difficulties in tracing the origins and classifications of specific elements and predicted scores make it hard for the analysts to find the needles in the haystack that allow them to provide a robust assessment of specific indicators. These difficulties present obstacles to scalable data-intensive curation and effective sustainability assessments. **In this project, a globally leading sustainability assessment company joins forces with leading digital curation researchers to address questions such as: Can automated curation mechanisms help knowledge workers to better assess the relevance of extracted data points? How can analysts be better supported in judging when to trust the outcomes of classification algorithms? Through these questions, the project develops conceptual models of data-intensive computational research processes that better support the analysis and design of next-generation services that enable the data-intensive curation and assessment work of sustainability analysts.****