The TRU LT&I AI Reading List

A selection of openly available readings on artificial intelligence from a range of critical perspectives.

- Machine Learning, Explained by Sara Brown. This is a really useful primer that goes over the definitions of key terms like deep learning, natural language processing, and other ideas you might have heard about but don't have a good understanding of. This is a great place to begin your journey into how AI works.
- 2016: The Return of Artificial Intelligence from *25 Years of EdTech* by Martin Weller. This chapter gives useful historical context for thinking about the emergence of AI (and remembering that it did not arrive in education spaces with the advent of ChatGPT). Strongly recommended is the companion podcast *Between the Chapters* and the episode paired with this chapter featuring Chris Gilliard.
- Anatomy of an AI System by Kate Crawford and Vladen Joler. This striking essay and visual representation uses the Amazon Echo to demonstrate the labour, environmental, and data requirements of AI. While not specifically focused on education, this is a very readable explanation of the extractive nature of AI technologies.
- How Much Water Does AI Consume by Shaolei Ren. This piece from the OECD.AI policy observatory, gives an overview of some of the environmental concerns about AI and water use, of interest to educators who want to centre sustainability in their practice (a more in-depth analysis is available in the original article). Wired also produced a very readable summary of carbon issues that might be appropriate to assign as student reading.
- Humans are Biased. Generative AI is Even Worse by Leonardo Nicoletti and Dina Bass. This graphical representation of a journalistic investigation into racial bias in AI-generated creations is highly impactful and appropriate to a student audience in any discipline.
- Indigenous Protocol and Artificial Intelligence Position Paper by Jason Lewis, ed.This position paper, prepared by the Indigenous Protocol and Artificial Intelligence Working Group, offers Indigenous approaches to engaging with AI technologies. In seeking to describe a multiplicity of perspectives, the position paper is presented as a series of heterogenous texts by different authors.
- Unpacking the Black Box of AI in Education by Nabeel Gillani et. al. This article gives examples of how AI is already used in education and suggests cautions and considerations for anyone working with these technologies. It is written for readers who do not come from a tech background but want specifically to understand the educational implications of AI.
- Learning to Work with the Black Box: Pedagogy for a World with Artificial Intelligence by Margaret Bearman and Roja Ajjawi. This article proposes a pedagogical approach to artificial intelligence that accepts, rather than tries to explain or understand, the "black box" of AI. This pedagogy centres helping students to understand quality issues with and

limitations of AI and takes a relational approach, assuming that we have to live and work alongside these technologies.

- On the Dangers of Stochastic Parrots: Can Language Models be Too Big? by Emily Bender, Timnet Gebru, Angelina McMillan-Major and Margaret Mitchell. A stochastic parrot is an AI tool that creates text that *sounds* plausibly like human-generated text on the surface, but do not actually understand how human language works. This highly influential (and extremely controversial) paper asks us to consider the risks of harm from the AI mimicry of human speech. Google fired Gebru and Mitchell over this work.
- Teaching Machines, or How the Automation of Education Became 'Personalized Learning' by Audrey Watters. This essay, which Watters expands on in her book *Teaching Machines*, asks us to think about the roots of AI-driven educational experiences (preceding generative AI) as part of the movement to automate teaching and the ideology that underlies the quest for "individualized" learning.
- ChatGPT Can't Kill Anything Worth Preserving by John Warner. In this post, John Warner thinks through the problems with writing instruction that make ChatGPT such an attractive writing partner for learners. This piece imagines writing instruction and why we assign essays, and not the issue of academic integrity, as the biggest issue in generative AI for educators.
- Academic Integrity and Artificial Intelligence: Is ChatGPT Hype, Hero or Heresy? by Geoffrey M. Currie. This article explores a series of implications for academic integrity and artificial intelligence from the perspective of medical education, as well as considering how generative AI might impact medical research and research publication.
- Deep Copyright: Up - And Downstream Questions Related to Artificial Intelligence (AI) and Machine Learning (ML) by Daniel Schönberger. This article – from 2018, reminding us that these conversations did not begin with ChatGPT! – examines copyright and AI both in terms of the training and datasets and in terms of the work produced by generative AI tools.
- Postplagiarism: Transdisciplinary Ethics and Integrity in the Age of Artificial Intelligence and Neurotechnology by Sarah Elaine Eaton. Here, Eaton expands on the notion of postplagiarism that she shared with TRU at the Teaching Practices Colloquium in 2022, inviting us to rethink our understanding of academic integrity and what it means for learners, scholars, and society in this new era.

Suggestions? Additions? Corrections? Email bgray@tru.ca. Thanks!