The University of Western Ontario
Faculty of Information and Media Studies

MIT 4031G—The Ethics and Social Impacts of Artificial Intelligence
Fall 2023 Course Outline

Instructor Information
Name: Prof. Luke Stark (pronouns: he/him)
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Student Meetings: By appointment via Zoom (https://calendly.com/lukestark)
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please note I will work to answer your email within 24 hours, excluding weekends

Course Information
Course Meetings: Fridays 9:30-12:30pm
Location: UC-1105 or online as noted in the syllabus
OWL site information: https://owl.uwo.ca/portal/site/196df2fd-d715-4e30-ab65-56e0a79a0720

Prerequisites or Antirequisites

Registration in fourth year of an Honours Specialization module in FIMS. Note: Enrolment is based on a ballot system which is submitted prior to course registration.

The final date to drop this course without academic penalty is **Monday, November 13, 2023**.

Course Syllabus

Course Description
This course will provide students with the opportunity to examine the ways artificial intelligence systems and digital automation technologies are reshaping the practices, discourses, and imagined futures of contemporary life. The course will provide students with a rich understanding of these AI systems' histories, technical affordances, ethical and social impacts. Students will learn both understand what these technologies can and cannot do, and connect them to broader social, ethical, and philosophical debates around the role of digital technologies in modern societies.

Course Objectives
In these challenging times, the first objective of the course is to support each other throughout the semester. Additionally, by the conclusion of the course I hope you'll also feel confident to do the following:

- Think expansively about the historical antecedents and social impacts of artificial intelligence and automation technologies such as machine learning.
- Analyze and describe how broader controversies around the ethical and social implications of the technologies apply to specific case studies in sectors such as healthcare, criminal justice, finance, and the arts.
- Become adept in applying your knowledge to the rapidly changing public and scholarly conversation around digital automation.
- Develop and hone a mix of critical research skills, and learn to use these skills synthetically, creatively, and thoughtfully to your own analyses and arguments.

- Apply your knowledge, research, and writing skills to a particular set of research problems.

Weekly Topics and Readings

Please read texts in the order assigned. Please note that readings assigned for presentations are optional for everyone except the presenter.

1. Epistemology
Friday, September 8

> Marx, Leo. "Technology: The Emergence of a Hazardous Concept." *Technology and Culture* 51, no. 3 (2010): 561–77.7.

> Ginzburg, Carlo. "Morelli, Freud and Sherlock Holmes: Clues and Scientific Method." *History Workshop Journal* 9, no. 1 (September 6, 2009): 5–36.

2. History
Friday, September 15

> Deleuze, Gilles. "Postscript on Control Societies." In *Negotiations, 1972-1990*, by Gilles Deleuze, 177–82. translated by Martin Joughin. Columbia University Press, 1990.

> Whittaker, Meredith. "Origin Stories: Plantations, Computers, and Industrial Control." *Logic(s)* 19 (2023), https://logicmag.io/supa-dupa-skies/origin-stories-plantations-computers-and-industrial-control/

> Lepage-Richer, Théo, and Fenwick McKelvey. "States of Computing: On Government Organization and Artificial Intelligence in Canada." *Big Data & Society* 9, no. 2 (2022): 20539517221123304.

> Presentations:

> Hicks, Mar. "When Winning Is Losing: Why the Nation That Invented the Computer Lost Its Lead." *Computer* 51, no. 10 (2018): 48–57.

> Jones, Matthew L. "How We Became Instrumentalists (Again): Data Positivism since World War II." *Historical Studies in the Natural Sciences* 48, no. 5 (2018): 673–84.

*3. Fairness (***class will be via Zoom and will begin at 10:00am***) (***300-word essay abstract due***)*
Friday, September 22

> Dwork, Cynthia, and Deirdre K. Mulligan. "It's Not Privacy, and It's Not Fair." *Stanford Law Review Online* 66 (September 3, 2013): 35–40.

> Hoffmann, Anna Lauren. "Where Fairness Fails: Data, Algorithms, and the Limits of Antidiscrimination Discourse." *Information, Communication & Society* 22, no. 7 (2019): 900–915.

> Kalluri, Pratyusha. "Don't Ask if AI Is Good or Fair, Ask How It Shifts Power." *Nature* 583 (2020): 169.

> *Presentations:*

Raji, Inioluwa Deborah, I Elizabeth Kumar, Aaron Horowitz, and Andrew Selbst. "The Fallacy of AI Functionality." *2022 ACM Conference on Fairness, Accountability, and Transparency*, 2022, 959–72.

Selbst, Andrew D., danah boyd, Sorelle A Friedler, Suresh Venkatasubramanian, and Janet Vertesi. "Fairness and Abstraction in Sociotechnical Systems," 59–68. *Proceedings of FAccT 2019*, 2019.

Observance of National Day for Truth and Reconciliation – No class
Friday, September 29

*4. Classification (**critical commentary #1 due***)*
Friday, October 6

Titchkosky, Tanya. "Normal." edited by Rachel Adams, Benjamin Reiss, and David Serlin, 130–32. *Keywords for Disability Studies*. NYU Press, 2015.

Foucault, Michel. "17 March 1976," 239–63. *Society Must Be Defended*. Picador, 2003.

Presentations:

Browne, Simone. "Digital Epidermalization: Race, Identity and Biometrics." *Critical Sociology* 36.1 (2010): 131–150.

Gaboury, Jacob. "Becoming NULL: Queer Relations in the Excluded Middle." *Women & Performance: A Journal of Feminist Theory* 28, no. 2 (June 20, 2018): 143–58.

*5. Power (**rough essay draft due***)*
Friday, October 13

Agre, Philip E. "Surveillance and Capture: Two Models of Privacy." *The Information Society* 10, no. 2 (April 1994): 101–27.

Amoore, Louise. "Machine Learning Political Orders." *Review of International Studies*, 2022, 1–17.

Presentations:

Redden, Joanna, Lina Dencik, and Harry Warne. "Datafied Child Welfare Services: Unpacking Politics, Economics and Power." *Policy Studies* 41, no. 5 (2020): 507–26.

Campolo, Alexander, and Kate Crawford. "Enchanted Determinism: Power without Responsibility in Artificial Intelligence." *Engaging Science, Technology, and Society* 6 (January 8, 2020): 1–19.

6. Prediction and Judgment
Friday, October 20

Hong, Sun-ha. "Prediction as Extraction of Discretion." *Big Data & Society* 10, no. 1 (2023): 205395172311710.

Birhane, Abeba. "The Impossibility of Automating Ambiguity." *Artificial Life*, 2021, 1–18.

Presentations:

Lum, Kristian, and William Isaac. "To Predict and Serve?" *Significance* 13, no. 5 (2016): 14–19.

Buolamwini, Joy, and Timnit Gebru. "Gender shades: Intersectional accuracy disparities in commercial gender classification." *Conference on Fairness, Accountability and Transparency*. 2018.

7. Trust and Reliability (*see note below*)
Friday, October 27

McLeod, Carolyn. 2020. "Trust," *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, substantial revision 2020, originally published 2006. https://plato.stanford.edu/entries/trust/

Shneiderman, Ben. "Human-Centered Artificial Intelligence: Reliable, Safe & Trustworthy." *International Journal of Human–Computer Interaction* 36, no. 6 (2020): 495–504.

Ryan, Mark. "In AI We Trust: Ethics, Artificial Intelligence, and Reliability." *Science and Engineering Ethics* 26, no. 5 (2020): 2749–67.

In lieu of class, students will participate virtually in an academic workshop "(Dis)Trust and AI: Perspectives from Across Disciplines and Sectors." More information at https://www.rotman.uwo.ca /event/distrust-and-ai-perspectives-from-across-disciplines-and-sectors/#content

Fall Reading Week – No class
Friday, November 3

8. Emotion and Animation (*revised essay draft due*)
November 10

Dror, Otniel E. "Counting the Affects: Discoursing in Numbers." *Social Research* 68, no. 2 (July 30, 2001): 357–78.

Nagy, Jeff. "Autism and the Making of Emotion AI: Disability as Resource for Surveillance Capitalism." *New Media & Society*, 2022, 146144482211095.

Silvio, Teri. "Animation: The New Performance?" *Journal of Linguistic Anthropology* 20, no. 2 (2010). 422-38.

9. Generative Models
November 17

Salvaggio, Erik. "How to Read an AI Image: The Datafication of a Kiss." *Cybernetic Forests*, October 22, 2022, https://cyberneticforests.substack.com/p/how-to-read-an-ai-image

Philosophers on Next-Generation Large Language Models, *Daily Nous*, March 14, 2023 https://dailynous.com/2023/03/16/philosophers-on-next-generation-large-language-models/

*Please read a **minimum of three** of these short pieces *excluding my own* and be prepared to speak about them in class,*

Presentations:

Bender, Emily M., Timnit Gebru, Angelina McMillan-Major, and Shmargaret Shmitchell. "On the Dangers of Stochastic Parrots🦜." *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 2021, 610–23.

Jiang, Harry H., Lauren Brown, Jessica Cheng, Mehtab Khan, Abhishek Gupta, Deja Workman, Alex Hanna, Johnathan Flowers, and Timnit Gebru. "AI Art and its Impact on Artists." *Proceedings of the 2023 AAAI/ACM Conference on AI, Ethics, and Society*, 2023, 363–74.

*10. Governance I (***critical commentary #2 due***)*
November 24

Greene, Daniel, Anna Lauren Hoffmann, and Luke Stark. "Better, Nicer, Clearer, Fairer." In *Proceedings of the 52nd Hawaii International Conference on System Sciences (HICSS)*, edited by T X Bui and R H Sprague, 2122–31, 2019.

Presentations:

Metcalf, Jacob, Emanuel Moss, and danah boyd. "Owning Ethics: Corporate Logics, Silicon Valley, and the Institutionalization of Ethics." *Social Research An International Quarterly* 82, no. 2 (2019): 449–76.

Brandusescu Anna. *Artificial intelligence policy and funding in Canada: Public investments, private interests*. Centre for Interdisciplinary Research on Montreal, McGill University, 2021

11. Governance II
December 1

Gray, Catriona. "Human Rights." *A New AI Lexicon*, AI Now Institute, 2021.
https://ainowinstitute.org/publication/a-new-ai-lexicon-human-rights

Posada, Julian. "Labor." *A New AI Lexicon*, AI Now Institute, 2021.
https://ainowinstitute.org/publication/a-new-ai-lexicon-labor

Mackereth, Kerry. "AI Nationalism." *A New AI Lexicon*, AI Now Institute, 2021.
https://ainowinstitute.org/publication/a-new-ai-lexicon-ai-nationalism

Tarnoff, Ben and "Kim." "Tech workers against the Pentagon." *Jacobin Magazine,* June 6, 2018,
https://jacobin.com/2018/06/google-project-maven-military-tech-workers

Presentations:

Prabhakaran, Vinodkumar, Margaret Mitchell, Timnit Gebru, and Iason Gabriel. "A Human Rights-Based Approach to Responsible AI." *arXiv*, 2022.

Dencik, L. "Towards data justice unionism? A labour perspective on AI governance." In P.

Verdegem (Ed.) *AI for everyone? Critical perspectives* (London, UK:University of Westminster Press, 2021), pp. 267–284.

12. Futures (*final essay draft due*)
December 8

Singh, Aditya, and Daniel Vale. "Existential Risk." *A New AI Lexicon*, AI Now Institute 2021. https://ainowinstitute.org/publication/a-new-ai-lexicon-existential-risk

Singh, Ranjit, Rigoberto Lara Guzmán, and Patrick Davison, eds. *Parables of AI in/from the Majority World*. New York: Data & Society Research Institute, 2022. http://dx.doi.org/10.2139 /ssrn.4258527.

Choose one short piece and be prepared to present it to the class

Eveleth, Rose. *Welcome to Vanguard Estates*: *A story in which you choose your own path*. Data & Society Research Institute, 2018

Course Materials
All course materials will be available via the course site on OWL.

Methods of Evaluation
There are no late penalties for written assignments in this course, but I am constrained by the final mark submission deadlines set by the university.

Collegiality & Engagement: 20%
You will be evaluated on your qualitative and quantitative contributions to course discussions. This grade will be assessed by your completion a weekly "exit ticket" through which you can ask further questions about the material and provide other feedback to me. The exit ticket will also present a space to post links to notable news articles you've seen over the past week dealing with topics related to the class. At the beginning of each class session, we will discuss some of these articles together as a warm-up exercise.

Critical Commentaries: 10% (5% each, due weeks 4 and 10)
Students will submit two brief reports on a topic related to the course, in which a course reading is linked to current events.

Each report will be based on a reading from the reading list (or a related reading, with permission of the instructor), discussed in the context of a very recent (within the past two months) journal, newspaper, magazine or blog article relating to the course reading and selected by the student. Topics should be related to those covered in the preceding weeks of class (e.g., 1-4 for report #1, 5-6 for report #2 and 7-9 for report #3). This exercise aims to help you develop the skills needed to communicate complex ideas clearly and in plain language for diverse audiences.

Commentaries should be between 600-800 words, including an overview and synthesis of the two sources, plus the requirements outlined below. Please make sure to include a reference list (not included in the word limit). This is an exercise in writing concisely and with insight about theory, research and/or practice. Assignments that merely summarize the readings are not appropriate – you need to provide some critical synthesis. Avoid burying yourself in details: reflect on what you have read, note down the important points you want to make, and proof-read and revise your writing to keep the piece concise. Include the following elements when writing your commentaries:

- What is the overall theme and what are the key ideas in the articles? There will often be many possible themes and key ideas. For you, from your perspective, what stands out as significant?
- Identify, where possible, the type of sources used by the author(s). For example, for a journal article, the author might have searched previous literature and/or conducted original research using study subjects; a journalist might have conducted interviews or commented on a major report that has been released.
- Why did you select these two readings – what brings them together, conceptually? Which arguments and what analysis on the key ideas did you find fit in most with your own ideas? Why? Did you disagree with any of the ideas presented? Why?

In the class in which each commentary is due, each student will be asked to very briefly describe their topic and answer the following two questions:
- What motivated you to choose this topic? What activated you about it?
- How does the topic relate to the course content so far?

You will have three minutes (with a hard stop!) to present this material, so think carefully about what want to say.

Commentaries will be graded on the appropriateness of the articles selected, the clarity and concision of your analysis, and evidence that you've thought about the issue deeply and selected key messages that have relevance to each other. You will lose marks if sources are not identified or cited properly, if no critical synthesis or relevance is provided, or if reports exceed the word limit.

Seminar Presentation & Facilitation: 25%
Once a term, you will be responsible for a twenty-minute, in-depth presentation of one of the week's readings marked as "seminar presentations." In that presentation, you should present the piece's main arguments, explain its broader scholarly context, and connect its contribution to contemporary debates both academic and public. You will also facilitate class discussion through drafting 3-4 relevant class discussion questions. A sign-up list will be available on the OWL course site at the beginning of the semester. **Please make an appointment with me the week prior to your assigned presentation to discuss your plans for your presentation.**

Research Essay: 45%
Throughout the semester, you will work on a major research paper on a topic of your choice. The final draft should be approximately 4,500-5,000 words long, including your reference list. Note you will develop this work in multiple stages over the course of the semester.

You will draw on both primary and secondary sources to construct a literature review, make an original argument, and conduct a scholarly analysis to support your findings using methods of your choice. It can also make targeted recommendations for a specific audience (e.g. policymakers or technologists).

We will have two scheduled meetings for me to provide feedback about your paper during the semester, and we will discuss further assignment details in class. This paper should be seen as the basis for a potentially publishable scholarly article.

The essay's components will be assessed as follows:

300-word abstract (worth 5% of your course grade), due **Friday, September 22, 2023**

Rough draft (worth 10% of your course grade), due **Friday, October 13, 2023**

Revised draft (worth 25% of your course grade), due **Friday, November 10, 2023**

Final draft (worth 5% of your course grade), due **Friday, December 8, 2023**

Course Conduct

Your goal in this course should be full attendance, attention, participation, listening and reading all of the required texts. That said, such goals are always aspirational. Do your best, but don't beat yourself up when (as we all do) it feels to you as if you come up short.

Disagreements are expected, but while arguments are not contests, they often have high stakes (sometimes invisible to you, but highly compelling to others – see the EDI principles below). Personal attacks, bullying, or intimidation is not acceptable under any circumstance. Please keep nitpicking to a minimum; all questions, whether basic or advanced, are valuable. Remember, you are free to change your mind at any time—as are others.

Do not engage in "seek and destroy" criticism of others' ideas, or of ideas in the readings. Critique is a powerful tool and does damage. If you have something critical to say about a reading, please be ready to explain how the piece could be improved; if you disagree with the premise of a piece, read to understand what motivates the argument — without knowing your adversary, how can you defeat it? And please remember that some people may feel less comfortable speaking up in class, while some feel more comfortable.

The testimony of personal experience is a necessary and often valuable part of our intellectual grounding and trajectory. However, like critique, testimony is also a powerful tool that can cut both ways. Please be thoughtful about mobilizing personal experience in class. Ask yourself if the testimony is relevant, and safe for you to share; ask yourself too if you are prepared to seriously consider others' interpretations of your experience if they differ from your own? Anecdotes are different kinds of evidence that systematically collected scholarly data, and useful (or harmful) in different ways.

Finally, in this course, I'd like you to strive to embody Western's equity, diversity and inclusion (EDI) principles. Western University's institutional commitment to equity, diversity and inclusion (EDI) supports the University's mandate as a research-intensive institution of higher learning, an employer of choice and a community leader. The University is enriched by the diversity of our campus community and strengthened by our shared commitment to equity and inclusion. Black Lives Matter, as do the lives and experiences of Indigenous peoples, other visible minorities, and all underrepresented and equity-seeking groups*.

Your conduct in this course should be guided by the principles below:

Equity – We value equity of access and opportunity for members of underrepresented and equity-seeking groups*. We take action to identify and address barriers to the full participation of members of these groups at the University.

Diversity – We value and respect the diversity of our campus community. We recognize the important contributions that diverse perspectives and lived experiences bring to Western's learning, teaching, working and research environments.

Inclusion – We value inclusion and active engagement with and across diverse communities in all aspects of university life. We foster a welcoming campus community where everyone feels respected, valued and included.

Members of underrepresented or equity-seeking groups includes, but may not be limited to, women, Indigenous peoples (First Nations, Inuit and Métis), persons with disabilities, members of racialized groups and members of LGBTQ2+ communities. In recognition that all individuals have multiple aspects of identity, an intersectional lens will also be used when assessing barriers and/or developing policies/programs at the University.

For more information on Western's policies around academic integrity, including plagiarism, please visit https://teaching.uwo.ca/teaching/assessing/academic-integrity.html

Statement on Generative AI
This course is a senior seminar, in which you are evaluated in large part on the quality of your written argument. As such, the use of AI content generators (such as ChatGPT) to complete assignments is not allowed in this course. Remember that plagiarism includes, but is not limited to, the unauthorized use of generative artificial intelligence to create content that is submitted as one's own. However, I am aware it is extremely easy to use such AI content generators without detection. I am therefore trusting you to abide by this rule by the honor system—in return for my full attention and engagement with your work, I ask that you submit yourself to the often-frustrating process of writing from scratch.

Covid Contingency Statement
In the event of a COVID-19 resurgence, or other health emergency, during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will not change. Any remaining assessments will also be conducted online as determined by the course instructor.

If university policy and public health directives necessitate additional measures to manage the spread of disease, students may be required to resume masking in instructional spaces. Students who are unable to wear a mask for medical reasons should seek accommodation through Accessible Education

Land Acknowledgment
We acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Chonnonton Nations, on lands connected with the London Township and Sombra Treaties of 1796 and the Dish with One Spoon Covenant Wampum.

In doing so, we respect the longstanding relationships that Indigenous Nations have to this land, as they are the original caretakers. We acknowledge historical and ongoing injustices that Indigenous Peoples (First Nations, Métis and Inuit) endure in Canada, and we accept responsibility as a public institution to contribute toward revealing and correcting miseducation as well as renewing respectful relationships with Indigenous communities through our teaching, research and community service.

For more information about the purpose and significance of land acknowledgments, please visit https://indigenous.uwo.ca/initiatives/land-acknowledgement.html.

Syllabus Credits
This syllabus is grounded in part on materials developed by Drs. Gabriella Coleman of McGill University, Jonathan Sterne of McGill University, Anna Lauren Hoffmann of the University of Washington, Daniel Greene of the University of Maryland, College Park, Karen Levy of Cornell University, and Jay Shaw and Ross Upshur of the University of Toronto.