



UNIVERSITY OF
CAMBRIDGE

Institute of Continuing Education

Weekend Course 2023 - 2024

2324NRX007

AI and society

Start date

3 November 2023

End date

5 November 2023

Venue

Madingley Hall
Madingley
Cambridge
CB23 8AQ

Tutor

Dr Jonnie Penn

Course code

2324NRX007

For further information contact

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Tutor biography

Dr Jonnie Penn, FRSA, is a historian of information technology, broadcaster, and public speaker. In addition to teaching the AI Ethics and Society masters at the University of Cambridge, he is an Affiliate at the Berkman Klein Center at Harvard Law School, a #1 New York Times bestselling author, a fellow of the Royal Society of the Arts and a Research Fellow at St. Edmunds College. He has held prior fellowships at the MIT Media Lab, Google, and the British National Academy of Writing. He writes and speaks widely about youth empowerment, the future of work, data governance, and sustainable digital technologies.

Course programme

Friday

Please plan to arrive between 16:30 and 18:30. You can meet other course members in the Terrace Bar which opens at 18:15. Tea and coffee making facilities are available in the study bedrooms.

19:00	Dinner
20:30 – 22:00	History & Nature of AI
22:00	Terrace Bar open for informal discussion

Saturday

07:30	Breakfast (for residents only)
09:00 – 10:30	Attempts to Conceptualise 'AI'
10:30	Coffee
11:00 – 12:30	Prehistories of AI and Measures of Progress
13:00	Lunch
14:00 – 16:00	Free time
16:00	Tea
16:30 – 18:00	Genealogies of Conditioning
18:00 – 18:30	Free time
18:30	Dinner
20:00 – 21:30	The Hard Ecological Limits on an AI Future
21:30	Terrace Bar open for informal discussion

Sunday

07:30	Breakfast (for residents only)
09:00 – 10:30	Synthetic Media
10:30	Coffee
11:00 – 12:30	Automation of scientific discovery (Dr. Milena Ivanova)
12:45	Lunch

The course will disperse after lunch

Course syllabus

Aims:

The course will allow you to:

1. Consider complex sociotechnical issues both systematically and creatively
2. Show originality in tackling and solving these problems
3. Apply historical understanding of AI ethics and governance to develop new insights

Summary of content:

In the mid-1950s, researchers in mathematics, administration, and engineering melded formal theories of problem solving and intelligence with another powerful new tool for control: the electronic digital computer. This course briefly introduces the multi-century long historical forces that informed this fabled inflection point, as well as the forces that shaped the development of artificial intelligence (AI) thereafter. These complex histories provide rich evidence with which to calibrate speculation about AI and AI Ethics in the decades ahead.

Presentation of the course:

This course will include seven lectures that build upon the suggested and assigned readings.

As a result of the course, within the constraints of the time available, students should be able to:

1. Discuss the ethical and societal challenges of AI with an understanding of its history and its relationship to other disciplines and technologies.
2. Identify the capabilities of current AI systems, their key applications and the potential ethical and societal challenges of those applications.
3. Evaluate key ethical and societal challenges arising from the use of AI and the existing critical literature.
4. Analyse the strengths and weaknesses of current governance approaches for addressing the challenges posed by AI.

Reading and resources list

There are no required readings for this course. We recommend reading the following materials before or after the course.

Pasquale, Frank. 'The Second Wave of Algorithmic Accountability'. *The Law and Political Economy Project*, 25 November 2019. <https://lpeproject.org/blog/the-second-wave-of-algorithmic-accountability>.

Winner, Langdon. 'Do Artifacts Have Politics?' *Daedalus* 109, no. 1 (1980): 121–36. www.jstor.org/stable/20024652

Daston, Lorraine (2018). 'Calculation and the Division of Labor, 1750-1950'. *Bulletin of the German Historical Institute*, 62 (Spring), 9-30. <http://hdl.handle.net/21.11116/0000-0001-DBC7-8>

Archer, Pechawis, Jason Edward Lewis, Noelani Arista, and Suzanne Kite. 'Making Kin with the Machines'. *Journal of Design and Science*, no. 3.5 (16 July 2018). <https://jods.mitpress.mit.edu/pub/lewis-arista-pechawis-kite>.

Francesca. 'Is GPT-3 Islamophobic?' *Towards Data Science*, 3 February 2021. <https://towardsdatascience.com/is-gpt-3-islamophobic-be13c2c6954f>.

Online resources:

Benjamin, Ruha. *Race after Technology: Abolitionist Tools for the New Jim Code*. Medford, MA: Polity, 2019.

Cook, Scott D. N. 'The Structure of Technological Revolutions and the Gutenberg Myth'. In *New Directions in the Philosophy of Technology*, edited by Joseph C. Pitt, 63–83. Dordrecht: Springer Netherlands, 1995. https://doi.org/10.1007/978-94-015-8418-0_4.

Forsythe, Diana E. 'Engineering Knowledge: The Construction of Knowledge in Artificial Intelligence'. *Social Studies of Science* 23, no. 3 (August 1993): 445–77. <https://doi.org/10.1177/0306312793023003002>.

Jenkins, Destin, and Justin Leroy, eds. 'Introduction.' *Histories of Racial Capitalism*. Columbia Studies in the History of U.S. Capitalism. New York: Columbia University Press, 2021.

Tarnoff, Ben. 'To Decarbonize We Must Decomputerize: Why We Need a Luddite Revolution'. *The Guardian*, 18 September 2019. <https://www.theguardian.com/technology/2019/sep/17/tech-climate-change-luddites-data>.

Note: Institute of Continuing Education (ICE) students are entitled to 20% discount on books published by Cambridge University Press (CUP) which are purchased at the Press bookshop, 1 Trinity Street, Cambridge (Mon-Sat 9am – 5:30pm, Sun 11am – 5pm). A letter or email confirming acceptance on to a current ICE course should be taken as evidence of enrolment.

(Information correct as of 25 Oct 2023)