The Philosophy of Artificial Intelligence
Hauptseminar

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https://uni-tuebingen.de/studium/studienorganisation/semester-und-studienplanung/semestertermine/

This course will explore the social, political, moral, metaphysical and epistemological consequences of new technologies, especially artificial intelligence. We will ask questions like: Can machines create art? How have new technologies affected the roles of women? Can technology be racist? How does technology affect our social interactions with each other? Will machines be able to think and have subjective experiences? Could machines deserve moral treatment? Is there value in attempting to mimic the character and structure of the human mind in a machine?

Evaluation: ECTS will be given for assignments, 3 points for a presentation, 6 for a paper (10-15 pages), 5 points for an oral exam.

Teaching methods: The course will be conducted in English, and online via Zoom.

Course Schedule

Introduction (April 19th)

Foundations and Definitions of AI (April 26th)

Optional:
Short video on Turing machines
Play with a Turing machine
On “virtual machines,” consider the Redstone computers people make in Minecraft (e.g., here)
One rarely told part of the history of AI is about Walter Pitts. You can read about him here
Simulations of different neural nets
The State of Modern AI (May 3rd)

Overall


Neural networks


Generated Adversarial Networks

YouTube: “A Friendly Introduction to Generative Adversarial Networks (GANs).” Luis Serrano. https://www.youtube.com/watch?v=8L11aMN5KY8

Genetic Algorithms

YouTube: “Genetic Algorithms Explained By Example.” Kie Codes. https://www.youtube.com/watch?v=uQj5UNhCPuo

More philosophical


Problems facing AI (May 10th)

The Frame Problem:


YouTube. “The biggest problem in AI? Machines have no common sense.” Big Think. https://www.youtube.com/watch?v=IHE63fxpHCg


Solution?


The Symbol Grounding Problem:


Solution(s)?


Machine Consciousness (May 17th)


YouTube. “Scientists Put the Brain of a Worm into a Robot…and It MOVED” (https://www.youtube.com/watch?v=eYS7UIUM_SQ)

YouTube. “These Self-Aware Robots Are Redefining Consciousness.” (https://www.youtube.com/watch?v=chukkEeGrLM&t=1s)


AI and Art (May 31st)


AI and Medicine (June 7th)


Love and AI (June 14th)


AI, War and Weapons (June 21st)


https://doi.org/10.1162/DAED_a_00409

YouTube. “A.I. Is Making it Easier to Kill (You). Here’s How.” | NYT, YouTube:
https://www.youtube.com/watch?v=GFD_Cgr2zho


**AI and Politics (June 28th)**


https://doi.org/10.1093/scipol/scy064

https://bostonreview.net/forum/science-nature/daron-acemoglu-redesigning-ai

Oltermann, P. 2021. “‘At first I thought, this is crazy’: the real-life plan to use novels to predict the next war.” *The Guardian.*
https://www.theguardian.com/lifeandstyle/2021/jun/26/project-cassandra-plan-to-use-novels-to-predict-next-war

**AI Ethics (July 5th)**


Thoma, J. 2021. “How should artificial agents make risky choices on our behalf?”
https://www.lse.ac.uk/philosophy/blog/2021/06/08/how-should-artificial-agents-make-risky-choices-on-our-behalf/


**AI, Automation, and the Meaning of Work (July 12th)**


YouTube "The future of work: is your job safe?" The Economist. [https://www.youtube.com/watch?v=gUc5oN_ffRo](https://www.youtube.com/watch?v=gUc5oN_ffRo)


**AI and Education (July 19th)**


YouTube. “The Science of Thinking” Veritasium. [https://www.youtube.com/watch?v=UBVV8pch1dM](https://www.youtube.com/watch?v=UBVV8pch1dM)


**Final Presentations, General Revision, Final Paper, Oral Exam Advice (July 26th)**

No readings assigned, but have a look at some paper writing guides:

- [Guidelines on Writing a Philosophy Paper](https://example.com) (James Pryor)
- [Writing a Philosophy Paper](https://example.com) (Peter Horban)
- [Guide to the Study of Philosophy](https://example.com) (Garth Kemerling)
- [Undergraduate Philosophical Writing](https://example.com) (Martin Young)
- [Tips on Writing a Philosophy Paper](https://example.com) (Douglas Portmore)
- [7 Steps to a Better Philosophy Paper](https://example.com) (Bryan Roberts)