

PHILOSOPHY 340: MINDS AND MACHINES
FALL 2021

Professor Eric Swanson, <ericsw@umich.edu>

Office hours at <https://zoom.us/my/e.swanson>: Tuesdays and Thursdays 1:15–2:15, and by appointment.

This course will discuss minds, machines, the relationships between them, and the relationships they encourage and discourage. Throughout we will compare and contrast human minds and brains with machine ‘minds’ and ‘brains,’ considering questions like: Could a machine have a mind? Could a machine be conscious, or think in the ways that people do? What can human brains teach us about how a thinking machine might work, and vice versa? What might information processing, information integration, and information availability have to do with consciousness? Could the internet be conscious? How could we tell? How do machines and our interactions with them influence how humans think, learn, reason, and know? What are the promises and perils of artificial intelligence, big data, and gargantuan networks, especially when the underlying mechanics of machine and network reasoning are not transparent to us? How should machines be treated—including machines that exhibit some but not all features of human minds? Why? How should machines treat us?

BOOKS YOU SHOULD BUY OR BORROW

A Brief History of AI, by Michael Wooldridge

Rebooting AI: Building Artificial Intelligence We Can Trust, by Gary Marcus and Ernest Davis

The Internet of Us: Knowing More and Understanding Less in the Age of Big Data, by Michael Patrick Lynch.

Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy, by Cathy O’Neil.

The above are all available as Kindle editions. Other texts and media are available on Slack: <https://um-fa21-phil340.slack.com>

COURSE WEB SITE

UM Slack: <https://um-fa21-phil340.slack.com>

Please use the Slack #discussion channel to ask questions that aren’t specific to you! This has really helped my students in the past, especially because in this course everyone has different strengths and areas of expertise. And please use DMs on Slack for questions that are specific to you.

LECTURE

Mondays and Wednesdays 1-2:20, <https://umich.zoom.us/j/92453290483>

Be sure to use your umich.edu account to log in!

If you have connection issues just call: +1 312 626 6799 (Chicago), Meeting ID: 924 5329 0483

SECTIONS

002, Fridays at 11 with Sean Costello in 3463 Mason Hall

003, Fridays at 12 with Sean Costello in 1040 LSA

004, Thursdays at 3 with Sarah Sculco in 2334 SEB

005, Fridays at 12 with Ibrahim Haydar in G127 Angell Hall

006, Thursdays at 3 with Paul De Font Reaulx in 2346 SEB

007, Thursdays at 4 with Paul De Font Reaulx in G311 DENT

008, Thursdays at 4 with Sarah Sculco in R2310 BUS

009, Fridays at 11 with Ibrahim Haydar in 2407 Mason Hall

GRADING

15% each: three short (two to three page) papers, due 9/26, 10/24, and 11/14

20%: final paper (three to four pages), due 12/15

5%: introducing yourself to your GSI and me using a Slack DM, due by 9/7 (or a week after you add the course), graded pass / fail

15%: responses to the first readings (or viewing) of the week, graded pass / fail, submitted the day before our discussion. (E.g., your 9/7 reading response will respond to *A Brief History of AI*, Chapter 2 and/or Jill Lepore's "All the King's Data."; your 9/12 reading response will respond to *A Brief History of AI*, Chapter 3 and/or Hubert and Stuart Dreyfus's "Peripheral Vision: Expertise in Real World Contexts.") These don't have to be long—one paragraph which clearly articulates one question or comment is perfect. For a pass your response has to make it *clear* that you did the reading and thought about it. Reading responses are not required or expected for the days by which papers are due, so you have more time for your paper. Late responses will not be accepted, since the GSIs and I use these responses to help us prepare for lecture and sections. Be sure to submit your reading responses on the Canvas site for your section.

15%: your section grade, including participation in section and (optionally) lecture, surprise quizzes if necessary, etc. Excellent participation on Slack and reading responses will boost your section grade.

EXPECTATIONS

Remember that this syllabus is utterly incomplete. This is because things will change in ways that we can't anticipate. So pay close attention to changes in course policy, announced in lecture and on Slack.

Keep up with the readings. They demand close attention and careful thought. If you fall behind you'll miss much of what's going on for the rest of the semester.

We'll be discussing controversial issues in this course, and challenging our beliefs throughout. Be polite, respectful, and generous in discussion with your classmates and teachers.

I expect all students to understand the College of LSA's standards of academic integrity:

<https://lsa.umich.edu/lsa/academics/academic-integrity.html>
<https://www.lib.umich.edu/academic-integrity>

Read them carefully and contact me on Slack if you don't understand them fully! We encourage you to discuss the material with your classmates, but all work you turn in must be your own. Cheating or plagiarism will result in a grade of 0 for that assignment and disciplinary action by the University.

If you might need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate academic accommodations. SSD (734-763-3000; ssd.umich.edu) typically recommends accommodation through a Verified Individualized Services and Accommodations (VISA) form. Any information you provide is private and confidential.

University of Michigan is committed to advancing the mental health and wellbeing of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, contact Counseling and Psychological Services (CAPS) at (734) 764-8312 and

<https://caps.umich.edu/>

during and after hours, on weekends and holidays, or through its counselors physically located in schools on both North and Central Campus. You may also consult University Health Service (UHS) at (734) 764-8320 and

<https://www.uhs.umich.edu/mentalhealthsvcs>

or for alcohol or drug concerns, see

<http://www.uhs.umich.edu/aodresources>

For a listing of other mental health resources available on and off campus, visit:

<http://umich.edu/~mhealth/>

SCHEDULE

Monday 8/30	Organizational meeting
Wednesday 9/1	<i>A Brief History of AI</i> , Introduction and Chapter 1; David Marr, “Understanding Complex Information-Processing Systems”
Monday 9/6	No class (Labor Day)
Tuesday 9/7	Slack DM introducing yourself due; reading response to 9/8 readings due
Wednesday 9/8	<i>A Brief History of AI</i> , Chapter 2; Jill Lepore, “All the King’s Data”
Sunday 9/12	Reading response to 9/13 readings due
Monday 9/13	<i>A Brief History of AI</i> , Chapter 3; Hubert and Stuart Dreyfus, “Peripheral Vision: Expertise in Real World Contexts”
Wednesday 9/15	<i>A Brief History of AI</i> , Chapter 4; Francisco Varela, “The Re-Enchantment of the Concrete”
Monday 9/20	<i>Her</i> (directed by Spike Jonze)
Wednesday 9/22	<i>Rebooting AI</i> , Chapters 1 and 2
Sunday 9/26	First paper due, 2–3 pages
Monday 9/27	<i>A Brief History of AI</i> , Chapter 5
Wednesday 9/29	<i>Rebooting AI</i> , Chapter 3; Leslie Kaelbling, “The Importance of Being Adaptable”
Monday 10/4	<i>Rebooting AI</i> , Chapter 4; Barbara Partee, “Semantics”
Wednesday 10/6	<i>A Brief History of AI</i> , Chapter 6; <i>Rebooting AI</i> , Chapter 5
Monday 10/11	<i>Lo and Behold: Reveries of the Connected World</i> (directed by Werner Herzog)
Wednesday 10/13	<i>Rebooting AI</i> , Chapter 6
Monday 10/18	No class (Fall Study Break)
Wednesday 10/20	<i>Rebooting AI</i> , Chapter 7; Susan Gelman interview
Sunday 10/24	Second paper due, 2–3 pages
Monday 10/25	<i>The Internet of Us</i> , Chapters 1 and 2
Wednesday 10/27	<i>The Internet of Us</i> , Chapters 3 and 4
Monday 11/1	<i>The Internet of Us</i> , Chapters 5–7
Wednesday 11/3	<i>The Internet of Us</i> , Chapters 8 and 9
Monday 11/8	<i>A Brief History of AI</i> , Chapter 7; Judith Jarvis Thomson, “Killing, Letting Die, and the Trolley Problem”
Wednesday 11/10	<i>Weapons of Math Destruction</i> , Chapters 1, 3, and 4
Sunday 11/14	Third paper due, 2–3 pages
Monday 11/15	<i>Weapons of Math Destruction</i> , Chapters 5–7
Wednesday 11/17	<i>Weapons of Math Destruction</i> , Chapter 10 and Conclusion
Monday 11/22	<i>A Brief History of AI</i> , Chapter 8; Ruha Benjamin, “Default Discrimination”
Wednesday 11/24	Thanksgiving break
Monday 11/29	<i>The Matrix</i> , directed by Lilly and Lana Wachowski
Wednesday 12/1	<i>Rebooting AI</i> , Chapter 8 and Epilogue
Monday 12/6	<i>A Brief History of AI</i> , Chapter 8
Wednesday 12/8	“Hang the DJ” (<i>Black Mirror</i> Season 4)
Wednesday 12/15	Final paper due, 3–4 pages