

24.131: Ethics of Technology

Fall 2019

Updated: November 27, 2019

Course Description:

Introduces the tools of philosophical ethics through application to contemporary issues concerning technology. Takes up current debates on topics such as privacy and surveillance, algorithmic bias and fairness, the inevitable presence of morality and politics within technology, free basics, and what ethical engineering looks like in practice, among other things.

Meeting Times:

Class times: M/W 9:30 am – 11:00 am. 32-144

Instructors:

Milo Phillips-Brown (Office: 32-D962, milopb@mit.edu)

Office Hours by appointment

Quinn White (Office: 32-D962, qwhite@mit.edu)

Office Hours by appointment

Course Readings:

The basic materials for this class are written sources; so reading is important. Readings are posted to the course Stellar site and linked in the schedule below. Please note: we recognize that students have limited time for reading, and so we have kept readings to a minimum. The set readings are, however, required; and effective learning in lectures depends on your having done the set readings in advance.

Grading and Assessment

- Attendance, participation (30% of final grade)
- Quizzes: 10%
- Papers:
 - Paper 1a: (500 words) Reconstruct an argument. Due 9/25, 9:30 am (10%)
 - Paper 1b: (1250 words) Reconstruct and evaluate an argument; respond to comments given on paper 1b. Due 10/28, 9:30 am (15%).
 - Group Assignment: (1,000-1250 words) Analysis of algorithmic bias. Due 11/20, 9:30 am (15%)
 - Paper 3: (1500 words). Due 12/11, 9:30 am (20%)

Note: You must pass each component of the course in order to pass the course

Each student has a “time bank” of **3 days** to use without prior approval for turning in work past the established deadline. Unexcused late work beyond the first three days will lose $\frac{1}{3}$ grade per day (e.g., a B paper will receive a B-). Excused lateness will only be recognized with a note from S³ (<https://studentlife.mit.edu/s3>).

Additional Requirements

- Attendance is required. If, for whatever reason, you cannot attend class, you should contact us as soon as possible in advance of that class session.
 - Three or more unexplained absences will lower the attendance portion of the grade. An absence can be excused (only) with a note from S³.
- You should expect to disagree with things we read or discuss, with other people in class (including us). These disagreements may be vigorous but must always be reasoned and respectful.
- Electronics policy: Please do not use laptops, cell phones, tablets, or other electronic devices during class, unless you are using these devices for an approved classroom accommodation or have explained your use of these devices to us in advance.

Academic Integrity

Plagiarism and other forms of academic dishonesty will not be tolerated in this course. If in doubt about what counts as plagiarism, or about how to properly reference a source, consult the instructor or your TA. Other forms of academic dishonesty include: double submission of papers, aiding dishonesty, and falsification of records. If academic dishonesty is proven, this will result in severe disciplinary consequences, which could include any or all of the following: a redo of the assignment for a reduced grade; failure on the assignment; failure of the course; a letter in the student’s file in the Office of Student Citizenship or referral to the Committee on Discipline. If you are tempted to plagiarize because you are in crisis, it is always better to speak to your TA, the professor, your advisor, the academic deans, the counseling center, or another trusted authority on campus who can help you handle the crisis. For details about expectations, see the Academic Integrity Handbook: <https://integrity.mit.edu/>

In academic writing, then, you must give citations each time you use someone else’s ideas, words, phrasing, or unusual information. An insidious form of plagiarism is the “patchwork paper”—some words and ideas taken from source A are stitched together with words and ideas from source B and source C and.... In this class, you may refer to the assigned texts without full citation, if it is clear what text you are drawing upon. You must, however, give page numbers in parentheses after all

quotes and in support of your claims about the text. We will cover proper citations in advance of the first paper assignment. Failure to credit others' work, even if unintentional, constitutes plagiarism.

Accommodation

If you have a disability, then you have a right under Section 504 of the American with Disabilities Act to reasonable accommodations. If you would like to request accommodations, please contact Student Disabilities Services (<http://mit.edu/uaap/sds/> 5-104, 617-253-1674, uaap-sds@mit.edu). If you are eligible, they will give you an accommodation letter which you should bring to us as soon as possible. That way we can work together to make sure all of the course content is accessible to you.

Schedule and Readings:

Introduction

Sep 4
no reading

Morality in the machine and moral relativism

Sep 9
[Should a self-driving car kill the baby or the grandma? Depends on where you're from](#) MIT Technology Review, Karen Hao (2018)
[Moral and Cultural Relativism](#) James Rachels (2012)

Sep 11
[Why the Moral Machine is a monster](#) Abby Jaques (manuscript)
[Inside Uber before its self-driving car killed a pedestrian](#) Business Insider, Julia Bort (2018)
Play the [Moral Machine Experiment](#)

Sep 16
[Do artifacts have politics?](#) Langdon Winner (1980)

The robot apocalypse

Sep 18

[Existential risk prevention as global priority](#) Nick Bostrom (2013)

Sep 23

[Stop the robot apocalypse](#) *London Review of Books*, Amia Srinivasan (2015)

Ethical engineering in practice: integrity and rules

Sep 25

Guest speaker: [Jim Magarian](#) (MIT GEL)

[Paper 1a due](#) (at start of class)

Sep 30

[Two Concepts of Rules](#) John Rawls (1955)

Technology and disability

Oct 2

Guest speaker: [Marion Boulicault](#) (MIT Philosophy)

[Engineering the Brain](#) Eran Klein, et al. (2015)

Optional: [Implants and ethnocide: learning from the cochlear implant controversy](#) Robert Sparrow (2010)

Oct 7

[Causing disability, valuing disability, Elizabeth Barnes](#) (2014)

Algorithmic fairness: formal definitions and real-world settings

Oct 9

[Fairness in machine learning: Against false positive rate equality as a measure of fairness](#) pages 1-12, Robert Long (manuscript)

[Locking up our own](#) pages 3-8.5, James Forman Jr. (2017)

Oct 14: no class—Columbus Day

Oct 16:

[Fairness in machine learning: Against false positive rate equality as a measure of](#)

[fairness](#) pages 13-22, Robert Long (manuscript)
[Locking up our own](#) page 8.5-14, James Forman Jr. (2017)

Oct 21

[Interventions over predictions](#) (video), Chelsea Barabas, et al. (2018)

[Beyond legitimation](#) skip section 3, Rodrigo Ochigame, et al. (2018)

Oct 23

no reading

to do: review feedback you got on paper 1a; think about ideas for paper 1b

Algorithmic bias and discrimination

Oct 28

No class

Oct 30

[Big data's disparate impact](#) Part I, Solon Barocas and Andrew Selbst (2016)

[Missed connections: what search engines say about women](#) *Bitch Magazine*, Safiya Noble (2012)

Nov 1

No class (it's a Friday)

Paper 1b due at 11:59pm

Nov 4

[Demarginalizing the intersection of race and sex](#), Kimberlé Crenshaw (1989)

[Gender shades](#) (video), Joy Buolamwini (2018)

Nov 6

[Gender and race: \(What\) are they? \(What\) do we want them to be?](#), Sally

Haslanger (2000)

[The algorithm that helped Google Translate become sexist](#) *Forbes*, Parny Olson (2018)

Surveillance and privacy

Nov 11: no class—Veteran's Day

Nov 13

[Discipline and punish](#) pages 195-209.5, Michel Foucault (1975)

[Life Inside China's total surveillance state](#) (video) *The Wall Street Journal*, Josh Chin (2017)

[The Perpetual Lineup: Background](#) *Georgetown Law Center for Privacy and Technology*, Clare Garvie, et al. (2016)

Nov 18

[The age of surveillance capitalism](#) Introduction (excluding section VI), Shoshana Zuboff (2019)

[I visited 47 sites. Hundreds of trackers followed me](#) *New York Times*, Fahrad Manjoo (201)

[12 stats that prove why personalisation is so important](#) *Econsultancy*, Nikki Gilliland (2018)

Nov 20

[Do I make a difference?](#), Shelly Kagan (2011)

[To predict and serve](#), Kristian Lum and William Isaac (2016)

[Predictive policing: the future of law enforcement?](#) *National Institute of Justice Journal*, Beth Pearsall (2010)

Group assignment due (at start of class)

Nov 25:

Guest speaker: Asaf Lubin (Harvard Law School, Berkman Klein Center for Internet and Society)

[The Law and Ethics of Peacetime Espionage](#) (see Stellar), student packet

Nov 27

[A grand bargain to make tech trustworthy](#) *The Atlantic*, Jack Balkin and Jonathan Zittrain (2016)

[Information fiduciaries](#) pp.1187-94, 1205-09, 1225-30, Jack Balkin (2016)

[How to exercise the power you didn't ask for](#) *Harvard Business Review*, Jonathan Zittrain (2018)

Employee activism

Dec 2

[Letter from Birmingham jail](#), Martin Luther King (1963)

[Civil disobedience](#) Henry David Thoreau (1849)

[Three years of misery inside Google, the happiest company in tech](#), *Wired*, Nitasha Tiku

Optional: [The Crito](#), pp. 70-78 (margin numbers 48e-54e), Plato

Ethical engineering in practice, part I:

Dec 4

Guest speaker: Alan Lundard (MIT CSAIL)

no reading

Dec 9

Guest speaker: Raym Geis (Senior Scientist, ACR Data Science Institute)

[ACM code of ethics and professional conduct](#) section 1 (2018)

[Does ACM's code of ethics change ethical decision making in software development?](#) Andrew McNamara et al. (2018)

Skim [Trust in Physicians and Medical Institutions](#) Mark Hall (2001)

Funding technology research: where does the money come from?

Dec 11

Reading TBA

Final paper due: 11:59pm