



**LAW 206 – Responsible Use of Artificial
Intelligence: Ethics and Law**

Units: 4 units

Spring 2023

Day/Time: VPD 106

Location: N/A

Instructor: Daniel Sokol

Office: Musick Law Building

Office Hours: TBD

Email: dsokol@usc.edu

Phone:

Academic Calendar: Spring Semester 2023
69 instructional days

Classes Begin Mon January 9
Martin Luther King's Birthday Mon January 16
President's Day Mon February 20
Spring Recess Sun-Sun March 12-19
Classes End Fri April 28
Study Days Sat-Tue April 29-May 2
Exams Wed-Wed May 3-10

Course Description

This course introduces students to the legal, policy, and ethical dimensions of big data, predictive analytics, and related techniques. This course creates opportunities for the collection, aggregation, analysis, and use of information to create, capture and deliver value both financially and in terms of overall societal good. However, without It also creates dangers such as privacy violations and discrimination, as well as simple hubris about the effectiveness of management by algorithm.

Learning Objectives

The purpose of this course is to provide cross-disciplinary perspectives on Artificial Intelligence. Students will, upon successful completion of this course, be able to (1) identify the complex interaction between private governance and government regulation, (2) address trade-offs between regulation and innovation, (3) analyze the impacts of AI on individual rights, discrimination, and architectures of control.

Prerequisite(s)/Co-Requisite(s): None

Concurrent Enrollment: None

Recommended Preparation: None

Description and Assessment of Assignments

1. Participation accounts for 10% of the final grade, Graders/TAs actively note student participation during the semester.
2. Weekly response posts are due directly in Blackboard on the Friday of each week. Students will post 300/500 word reaction discussion(s) to the prompt for each reading. They will identify the questions(s), provide an answer and offer support for their answer while also noting some of the limitations to their answer.
3. The midterm is scheduled during week 8. It is a mixture of multiple choice questions and short answers.
4. The final exam is a mixture of multiple choice questions, short answers and one essay question.

Grading Breakdown

Evaluation of Grades

Assignment	Percentage of Final Grade
Participation	10%
Weekly response Prompt	50%
Test 1 (Midterm)	20%
Test 2 (final exam)	20%
TOTAL	100%

Grading Scale

Course final grades will be determined using the following scale

A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

WEEKLY SCHEDULE

The weekly responses to the prompts are dues in Blackboard every Friday.

Week 1: [Promise and Peril of A](#)

Jacob LaReviere et al, Where Predictive Analytics Is Having the Biggest Impact
Harvard Business Review, May 25, 2016

- What are the main business value propositions for analytics and big data?

Will Oremus, Move Fast and Break Trust, Slate, March 7, 2017

- What do the issues with Google's smart speaker and Uber's autonomous driving system have in common?

John C. Hull, Machine Learning in Business: Issues for Society, Rotman Management Magazine, Dec 31, 2019

- How do you partner with machines in ways where benefits outweigh costs to humanity?

Interview with Stuart Banner: The Struggle to Control Airspace, HARV. UNIV. PRESS
PODCAST

(2008), <https://www.hup.harvard.edu/news/audio/9780674030824-HUP-Podcast-Stuart-Banner-on-Who-Owns-the-Sky.mp3> (14 minutes)

- How do traditional legal rules get applied in a new context?

Aatif Suleyman, Elon Musk: Humans Must Become Cyborgs to Avoid AI Domination, THE INDEPENDENT (Feb. 15, 2017), <https://www.independent.co.uk/life-style/gadgets-and-tech/news/elon-musk-humans-cyborgs-ai-domination-robots-artificial-intelligence-ex-machina-a7581036.html>

- Should we be worrying about machines taking over?

John Perry Barlow, A Declaration of the Independence of Cyberspace (1996), <https://www.eff.org/cyberspace-independence>

- How seriously should we take these concerns?

Gideon Lewis-Kraus, The Great AI Awakening, N.Y. TIMES MAG. (Dec. 14, 2016), <https://www.nytimes.com/2016/12/14/magazine/the-great-ai-awakening.html>
Jessica Fjeld et al., Principled Artificial Intelligence: Mapping Consensus in Ethical Approaches to Principles for AI, BERKMAN KLEIN CENTER (2020), [https://dash.harvard.edu/bitstream/handle/1/42160420/HLS%20White%20Paper%20Final_v3.pdf](https://dash.harvard.edu/bitstream/handle/1/42160420/HLS%20White%20Paper%20Final_v3.pdf?sequence=1&isAllowed=y)
f?sequence=1&isAllowed=y (executive summary and visualization)

Week 2: AI Decision-making

Black Mirror: Entire History of You (series 1 episode 3)

- How can failure to appreciate how data is collected and analyzed lead to problems?

Pedro Domingos, A Few Useful Things to Know about Machine Learning, Communications of the ACM, October 2012

- What are the ways that machine learning requires human judgement or intervention?

Zeynep Tufekci, The Real Bias Built In at Facebook, N.Y. Times, May 19, 2016

- Why was Facebook criticized for its Trending Topics?
- If algorithms are inherently biased, does that undermine the value of analytics in business?

Will Douglas Heaven, We'll Never Have True AI Without Understanding the Brain, MIT TECH. REV. (Mar. 3, 2021),

<https://www.technologyreview.com/2021/03/03/1020247/artificialintelligence-brain-neuroscience-jeff-hawkins/>

- How does neuroscience matter?

Ajay Agrawal, Joshua Gans, and Avi Goldfarb, From Prediction to Transformation: To realize their potential, AI technologies need new systems that leverage them.

<https://hbr.org/2022/11/from-prediction-to-transformation>

- How do we think about digital transformation?

Week 3: Economic Effects of AI

Brynjolfsson, E., Rock, D., & Syverson, C. (2017). "Artificial intelligence and the modern productivity paradox: A clash of expectations and statistics". (No. w24001). National Bureau of Economic Research.

Mokyr, Joel, Chris Vickers, and Nicolas L. Ziebarth (2015). "The history of technological anxiety and the future of economic growth: Is this time different?." The Journal of Economic Perspectives 29.3 (2015): 31-50.

Korinek, A., & Stiglitz, J. (2017). "Artificial Intelligence and its implications for income distribution and unemployment", National Bureau of Economic Research, Inc. <http://www.nber.org/papers/w24174>

Week 4: Regulation of AI

Ryan Calo, Artificial Intelligence Policy: A Primer and Roadmap, 51 U.C. Davis L. Rev. 300 (2017)

“Big Data: Bringing Competition Policy to the Digital Era - Executive Summary” (OECD, 2017)

Gillian Hadfield, Rules for Robots: Building Effective Regulation for Artificial Intelligence

Week 5: Accuracy

Black Mirror: Be Right Back (Series 2 episode 1)

Gary Marcus & Ernest Davis, 8 (No, 9!) Problems with Big Data, N.Y. Times, April 6, 2014

- What are some of the common themes in the authors’ list of problems?

David Lazer et al, The Parable of Google Flu, Science, March 14, 2014

- Why was Google Flu Trends so accurate initially, and not subsequently?
- Should the failure of Google Flu make us skeptical about business analytics?

Michael Luca et al, Algorithms Need Managers, Too, Harvard Business Review, January-February 2016

- What is the role for business managers in overseeing the use of analytics?

Week 6: Transparency

Black Mirror: Hang the DJ (Series 4 episode 4)

Read *Houston Federation of Teachers v. Houston Ind. School District* (S.D. Texas, May 4, 2017)

- On what legal basis did the teachers challenge the value added measures system?

Jenna Burrell, How the Machine ‘Thinks’: Understanding Opacity in Machine Learning Algorithms, *Big Data & Society*, January-June, 2016

- Why is it difficult to identify the bases for recommendations generated by machine learning?

Cliff Kuang, Can A.I. Be Taught to Explain Itself?, *New York Times*, November 21, 2017

- Can “explainable AI” techniques address the dangers of analytics?

Elizabeth Holm, In Defense of the Black Box, *Science*, April 5, 2019

- Under what circumstances are “black box” decisions acceptable, or even desirable?
- Does the author address the concerns about nontransparency raised by the other articles?

Week 7: Risk and responsibility

Black Mirror: Hated in the Nation (Series 3 episode 6)

Andrew Smith, Franken-Algorithms: The Deadly Consequences of Unpredictable Code, *The Guardian*, August 30, 2014.

- Was Uber irresponsible in putting an autonomous vehicle on a public road?

- How do business incentives and engineering standards each contribute to the dangers of algorithmic systems?

National Transportation Safety Board, Preliminary Report, May 24, 2018

- Based on these findings, who if anyone should be held responsible for the death of Elaine Herzberg, the pedestrian struck by the Uber self-driving car?
- How could the risk of future accidents be mitigated?

Karen Hao, When Algorithms Mess Up, the Nearest Human Gets the Blame, MIT Technology Review, May 28, 2019

- What is the concept of “moral crumple zones”? How does it relate to responsibility for harms involving algorithmic systems?

Week 8: Fairness & MIDTERM

Black Mirror: Men Against Fire (Season 3, Episode 5)

Kate Crawford, The Hidden Biases in Big Data, Harvard Business Review, April 1, 2013

- What did the services the author describes do wrong?

Alex Miller, Want Less-Biased Decisions? Use Algorithms, Harvard Business Review, July 26, 2018

- So there’s nothing to worry about?

Harini Suresh and John Guttag, A Framework for Understanding Unintended Consequences of Machine Learning (January 2019)

- What are the different forms of fairness the authors describe? • Is it possible to build a fair system using machine learning?

Julia Angwin et al, Machine Bias, ProPublica, May 23, 2016

- Does the ProPublica report demonstrate unfair outcomes from the use of the COMPAS system for sentencing?
- What might explain the racial variations the researchers found?

Week 9: Discrimination

Aaron Klein, Credit Denial in the Age of AI, Brookings.com, April 11, 2019

- How can algorithms potentially create legally actionable discrimination in credit decisions?

Ricci v. DeStefano, 557 U.S. 557 (2009)

- How did the New Haven fire department respond when it found that white candidates did better on its promotion test?
- How did the court rule on the legal challenge to the fire department’s actions, and why?

Texas Dept. of Housing and Community Affairs v. Inclusive Communities Project (2015)

- How does the court respond to statistical evidence that low-income housing tax credits are offered primarily in non-white areas, arguably worsening segregation?

Andrew Selbst, A New HUD Rule Would Effectively Encourage Discrimination by Algorithm, Slate, August 19, 2019 • How would the proposed rule affect claims of algorithmic discrimination?

Week 10: Manipulation

Zeynep Tufekci, Algorithmic Harms Beyond Facebook and Google: Emergent Challenges of Computational Agency, Journal on Telecom. and High-Tech Law (2015), pp. 203-209

- Why was Facebook's emotional contagion study controversial?
- What is "algorithmic gatekeeping"? Why does Tufekci believe it is a concern?

danah boyd, Untangling Research and Practice: What Facebook's "Emotional Contagion" Study Teaches Us, Research Ethics (2016)

- Why does boyd advocate an approach to ethics "that does not differentiate between corporate and research practices"?

Yoree Koh and Jessica Kuronen, How Tech Giants Get You to Click This (and Not That), Wall Street Journal, May 31, 2019

- What is the difference between illegitimate "dark patterns" and ordinary interactive design techniques to maximize clicks?

Helen Coffey, Airlines Face Crack Down on Use of "Exploitative" Algorithm That Splits Up Families on Flights, The Independent, November 19, 2018

- Is it right to describe the airline practice in question an "exploitative algorithm"?

Week 11: Market Power

Jerry Useem, How Online Shopping Makes Suckers of Us All, Atlantic Monthly, May 2017

- Do you find algorithmic pricing practices troubling?

Greg Sivinski, Alex Okuliar & Lars Kjolbye (2017) Is big data a big deal? A competition law approach to big data, European Competition Journal, 13:2-3, 199-227, DOI: 10.1080/17441056.2017.1362866

- Do antitrust authorities understand big data?

Johnson, Justin and Sokol, D. Daniel, Understanding AI Collusion and Compliance (January 16, 2020). Cambridge Handbook of Compliance, (D. Daniel Sokol & Benjamin van Rooij, editors), (Forthcoming). Available at SSRN: <https://ssrn.com/abstract=3413882>

- Is AI collusion even possible

Sonia Kuester Pfaffenroth, Pricing Algorithms: The Antitrust Implications, <https://www.arnoldporter.com/en/perspectives/publications/2018/04/pricing-algorithms-the-antitrust-implications>

- Is antitrust risk real?

Week 12: Data Collection and Aggregation

Black Mirror: Arkangel (Series 4 episode 2)

Solon Barocas and Helen Nissenbaum, Big Data's End Run Around Procedural Privacy Protections, Communications of the ACM (November 2014)

- Why do the authors believe that transparency and consent are insufficient?

Gina Kolata, Your Data Were 'Anonymized'? These Scientists Can Still Identify You, New York Times, July 23, 2019

- How does de-anonymization work?

Kashmir Hill and Surya Mattu, How a Company You've Never Heard of Sends You Letters about Your Medical Condition, Gizmodo, June 19, 2017

- How can Acurian obtain seemingly private medical information?

The White House, Big Data: Seizing Opportunities, Preserving Values (2014), pp. 15-21

- What are the key elements of US privacy law?
- Do you think the U.S. legal framework is effective in general? Will it be effective for the novel challenges of big data and business analytics?

Izaak Crook, How GDPR Will Affect Data Science, Dataconomy.com, April 13, 2018

- How will the European General Data Protection Regulation affect the way companies use analytics?

Week 13: Prediction and Ethical Issues

Charles Duhigg, How Companies Learn Your Secrets, N.Y. Times Magazine, Feb. 16, 2012

- How does Target analyze customer data to make inferences about customers?
- In your opinion, is the Target system an intrusion on privacy? Why or why not?
- Do Target's actions violate any legal rules?
- Do Target's actions violate any ethical norms?
- Should Target do anything differently?

Michal Kosinski et al, Private Traits and Attributes are Predictable from Digital Records of Human Behavior, Proceedings of the National Academy of Sciences, April 9, 2013

- What kinds of information can be predicted based on Facebook Likes?
- What could possibly go wrong?

Jeffrey Mervis, Can a Set of Equations Keep U.S. Census Data Private?, Science, January 4, 2019

- What is differential privacy, and why is the US Census Bureau using it?

Khari Johnson, How Federated Learning Could Shape the Future of AI in a Privacy-Obsessed World, Venturebeat, August 9, 2019

- What is federated learning, and how could it address privacy concerns around analytics?

Week 14: Social Credit and "Scoring" Society

Mara Hvistendahl, Inside China's Vast Experiment in Social Ranking, Wired, Dec. 14, 2017

- What are the major elements of China's system?

Christopher Mims, The Secret Trust Scores Companies Use to Judge Us All, Wall Street Journal, April 6, 2019

- How are these trust scores similar to, and different than, the social credit scores in China?

Kate Crawford and Jason Schultz, Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms, 55 Boston College Law Review pp. 93-99, 121-28 (2014)

- Can legal mechanisms rein in problematic use of algorithmic scoring systems?

Week 15: Accountability

Bethan Cantrell, et al, Industry Needs to Embrace Data Ethics: How It Could Be Done (2016)

- What do you think of Microsoft's data ethics principles?

Darrell West, The Role of Corporations in Addressing AI's Ethical Dilemmas, Brookings, September 13, 2018

- Which of West's recommendations are relevant to companies other than the big technology platforms like Google and Facebook?

Algorithmic Accountability Act (Senate bill)

- What would this law require?
- How effective would it be in addressing the concerns we've discussed?

Week 16: Final Exam

Statement on Academic Conduct and Support Systems

Academic Integrity:

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new,

shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call
Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call
Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)
A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or otfp@med.usc.edu
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.