FIMS 9332
Special Topic: Datafied Society
Course Outline – Fall 2021
Weekly Sessions: Fridays 1:30-4:20 (FNB 2230)

<u>Instructor Information</u>
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<u>Office hours</u>
By appointment

<u>Course website</u>
OWL

<u>Class Time, Location and Format</u>
Classes will be face to face and synchronous.
Classes will be Fridays 1:30 – 4:20 (FNB 2230)

Enrollment in this course is restricted to graduate students in Media Studies, Library and Information Science and Health Information Science, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair from the student's home program.

<u>Overview</u>
The hype, controversy and debate surrounding contemporary uses of data systems have exploded in the last few years. This is connected to the rapid implementation by government and corporate bodies of practices that involve artificial intelligence, automated decision-making, machine learning, predictive analytics and increased data sharing. We know these systems can be used in ways that improve well-being, health, services and decision-making, but we also know these systems can be used in ways that discriminate, exacerbate inequality, infringe upon human, rights, socially sort, disrupt democratic processes, limit access to services and intensify surveillance. It is clear that we need to become more data literate and better appreciate how our information is being collected and used, in whose interests, and to what ends. In this module we will critically engage with contemporary data issues. In particular we consider how we might conceptualize contemporary datafication and its influence through the lenses of political economy, surveillance, power, social justice, governance, and activism. Along the way, through case studies and student research we consider specific uses of 'big data' in practice across the following areas: smart cities, education, advertising, journalism, health, science, finance, political campaigning, the surveillance industry, and the internet of things. Throughout the module we focus on promise and risk and aim for a nuanced appreciation of new and emerging datafied practices.

This course provides a critical introduction to datafication and no prior knowledge or experience with data related content is needed.

<u>Learning Objectives:</u>

- Understand, and engage with, the current debates around 'big data,' artificial intelligence and algorithmic decision-making
- Discuss the core actors, dynamics and trends in data generation and data use
- Critically evaluate the impact of data on society, culture, politics, the economy, and journalism
- Evaluate changes in society and everyday life that are induced by the increased role of data
- Demonstrate competence in advance library searches and information retrieval
- Demonstrate proficiency in both verbal and written modes with respect to reviewing and marshalling academic positions and developing an engaged point of view and argument
- Demonstrate conformity to academic protocols of presentation and analysis
- Apply theoretical concepts to practical case studies and to current social, political and economic problems
- Enhance abilities to design, plan and carry out a research project, from library research to written presentation
- Engage with academic debates in both verbal and written formats, critically assess academic work and develop an informed position

<u>Course Policies</u>

Student participation is central to this course. You are expected to do all readings, view all posted material as well as contribute to online discussions. You will need to reflect on issues of theory, method and analysis throughout.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

<u>Plagiarism</u>

It is very important that you are aware of requirements regarding plagiarism. Plagiarism is the use of another person's work without acknowledgment. Examples include:

- direct duplication, by copying (or allowing to be copied) another's work. This includes copying from a book, article, web site, or another student's assignment.

- paraphrasing another person's work with minor changes, but keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- submitting an assignment that has already been submitted for assessment in another subject;
- presenting an assignment as independent work when it has been produced in whole or part in collusion with other people, for example, another student.

Why is Plagiarism so Serious?

Plagiarism is defined as 'the taking and passing off the thoughts, writings, etc, of other people as your own'. In short, it is intellectual theft.

In not crediting the source, a person is guilty of stealing another's research, thinking, writing, or images (intellectual knowledge in all its forms). It is unacceptable at all times; it is completely unacceptable in an intellectual environment such as a university. We take a very dim view of students who engage in plagiarism. You must cite the source of information in the body of any essay or assignment and list the cited source in the final list of references ordered alphabetically. To do this properly, you need to be careful about recording the source of each note that you make, whatever the source, be it a lecture, a book, a journal, a film or TV documentary, or a source on the Internet.

If you have any questions about how to cite properly please ask me. Learning proper citation methods is part of the learning process and I am happy to offer support.

Statement on Academic Offences:
These are taken very seriously and you can find more details about what constitutes a Scholastic Offence here:
https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

Health/Wellness Services: Students who are in emotional/mental distress should refer to MentalHealth@Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

Accessible Education Western (AEW): Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with **Accessible Education Western (AEW)**, a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both **AEW** and their graduate programs (normally their Graduate Chair and/or Course nstructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.

Western University and FIMS accommodation policies:

Medical Accommodation:
- Western University policy on accommodation for medical illness, see: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf
- Student Medical Certificate (SMC): http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf
- Students seeking academic accommodation on medical grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counseling office of their home Faculty and provide documentation. It will be the Dean's Office that will determine if accommodation is warranted.
- Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for accommodation on medical grounds, or for other reasons. All documentation must be submitted to the Academic Counseling office of a student's home Faculty.

Compassionate Accommodation:
- Academic accommodation (extensions, makeup tests and exams, additional assignments etc.) may be given to students on compassionate grounds. The situations for which compassionate accommodation can be given must be serious, including significant events such as death in the immediate family, trauma (fire, robbery, harassment, muggings, car accidents, etc.), or emergency situations. Documentation is required.

Religious Accommodation:
- Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. http://multiculturalcalendar.com/ecal/index.php?s=c-univwo
- Further specific information is given in the Western Academic Calendar.

Evaluation & Assignments

Assessment:

1) Class Discussion Facilitation: 20%

2) Briefing Note: 2,000 words, 35 %, Due <u>October 30, 2020 2pm</u>

3) Research essay: 2,500 words, 45 %, Due <u>December 9</u>, 2 p.m.

<u>Class Discussion Facilitators – 20%</u>
Small groups will be asked to facilitate and lead weekly class discussions based on weekly readings. You will be asked to: a) summarize key points raised from weekly readings, b) identify aspects of the readings that you think warrant further class discussion, c) lead class discussion through the use of questions put to the class and/or themes and problems that you identify for discussion. You will select the week you want to present on in the first class. You will be asked to submit written summaries and also the questions and your strategies to generate class discussion. As this is a group assignment, all members of the group will receive the same score. Key to success is to demonstrate critical thinking, engagement with reading material and an ability to highlight the significance of reading material in relation to ideas and concerns raised across class content.

<u>Briefing Note – 35%</u>
The 2,000-word briefing note is to be based on a topic you select from a list of possible topics. You will be provided with a lot of direction about how to write a briefing note as well as examples to guide you. We will workshop briefing notes to address questions. The assignment provides an opportunity to fully investigate an area of interest and also gain practice in a form of writing that is widely used across public, private and civil society sectors. A comprehensive grading rubric will be provided in advance.

Research Essay – 45%
Your research essay can be on the same topic as your report / briefing note, and develop further some of the ideas you discuss in your briefing note. In your essay it will be useful to critically consider the implications of algorithmic systems in your issue area.

Topics
Below I have listed some potential topics that can be used for the briefing note and final essay. You are able to select another topic that you choose provided that you speak to me about this topic in advance.

Potential topics:

1) What are the ethical debates surrounding smart cities? Should there be greater regulation of smart city applications? You may want to use a case study to focus your discussion.

2) Debates around the Internet of Things can be quite polarized. Is there reason to be concerned?

3) How is big data being used in education? To what effect?

4) Focusing on one or two examples, discuss how datafication is influencing journalism and what some of the implications are.

5) How is big data being used in contemporary political campaigning? Why are some calling for greater transparency and accountability in this area?

6) Consider the materiality of big data, how does the turn to big data influence the environment?

7) How are algorithmic and sensing systems being implemented in areas of work and what are implications for workers?

8) How is the finance industry changing as a result of the use of new algorithmic systems? Should government regulators intervene?

9) Detail what is meant by the "surveillance industrial complex" and discuss key issues.

10) Detail how big data is being used in health, with particular attention to potential benefits and risks.

11) What do researchers mean by the 'quantified self'. How might the datafication of the self influence identity and/or relations between people?

Weekly Overview

1) Critically Engaging with Datafication, Sept. 10

2) Conceptualizing Data, Sept. 17

3) Data Walk, Sept. 24

4) Surveillance and the Importance of History, Oct. 1

5) Political Economy of Datafication, Oct. 8

6) Data Power: Policing and the Law, Oct. 15

7) Data Justice: Social Justice in an age of Datafication, Oct.22

8) Data Activism and Data for Good, Oct. 29

9) Automation and the Welfare State, Nov. 5

10) Data Governance: Policy and Oversight, Nov. 12

11) Datafication, Media and Democracy, Nov. 19

12) The Internet of Things: Grounding Ethics, Nov. 22

13) Data Sovereignty and Decolonizing the Digital, Dec.3

1)   Introductory Lecture: Critically Engaging with Datafication

This introductory lecture will provide an overview of datafication and outline some of the topics and debates we will be discussing throughout the module. We will discuss the course, assignments, and course expectations.

No assigned readings

2)   Conceptualizing Data

In this class we discuss Kitchin's overview of the data revolution and his arguments about why data is not straightforward.

Required reading:
Kitchin, Rob (2014) Chapters 1 and 4 in *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences*, New York: Sage.
Benjamin, Ruha (2019) "Introduction: The New Jim Code," *Race After Technology: Abolitionist Tools for the New Jim Code,* Cambridge UK: Polity.

Required viewing:
DoNotTrack-doc.com, Directed by Brett Gaylor
(visit site and view interactive content).

3)   Data Walk

We take a critical approach to data through 'data walking'. The aim of the walk is to begin to identify the data collection, assembly and use points all around us. Part one will involve observation and recording, part two will involve critical investigation to identify how much can be learned about the data objects we identify.

Required reading:

Powell, A. (2018) Data Walking, available: http://www.datawalking.org/about/

Masson, E. van Es, K. and Wieringa, M. (2020) Data Walking for Critical Data Studies: An Explorative Survey of Walking Methodologies, *Digital Culture & Education*, 11(1), available:
https://static1.squarespace.com/static/5cf15af7a259990001706378/t/5e259cdc518cc75eb73fd689/1579523296030/Final.pdf

4) Surveillance and the Importance of History

The Snowden revelations have changed how citizens understand surveillance, and provided much detail about the extent of government surveillance. This class considers the leaks and their implications by looking backward and

Required reading:

Greenwald, Glenn (2014) 'Chapter 3', *No Place to Hide: Edward Snowden, the NSA, and the U.S. Surveillance State*, Toronto: McClelland & Stewart.
Lyon, David (2018) 'Introduction', *The Culture of Surveillance*. Cambridge: Polity.

Viewing: CitizenFour (Laura Poitras, 2015)

5) Political Economy of Big Data

We discuss the political economy of big data by considering how it is being used in the private sector. We consider the technological and industry developments that enabled people to make money from collecting, analyzing and selling our data. We also highlight some of the concerns being raised about corporate uses of our data. We will consider the different positions on surveillance capitalism by Shoshanna Zuboff and Cory Doctorow (https://www.mediatechdemocracy.com/beaverbrook-lectures/shoshana-zuboff).

Required reading:

Angwin, Julia (2015) "A Short History of Tracking," *Dragnet Nation: A Quest for Privacy, Security, and Freedom in a World of Relentless Surveillance*, New York: St. Martin's Griffin, 21-36.
West, Sarah Myers (2019) Data Capitalism: Redefining the Logics of Surveillance and Privacy. Business & Society. 58(1):20-41. doi:10.1177/0007650317718185
Data for Black Lives (2021) Data Capitalism, https://datacapitalism.d4bl.org/#about

6)   Data Power: Policing and the Law

With big data comes a new set of power dynamics. The increasing ubiquity of data uses across fields means that more and more people are affected by data collection, tools and processes that they are not able to understand, interrogate, or challenge. In this class we consider some of new and emerging data power dynamics and use big data in policing and sentencing as an illustrative case study.

Required Reading:

Angwin, Julia, Larson, Jeff, Mattu, Surya and Kirchner, Lauren (2016) *Machine Bias*, ProPublica, May 23, available: https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing

Lum, K and Isaac, W (2016) To predict and serve? *Significance* 13(5): 14-19.

Williams, P. and Kind, E. (2019) Data-driven Policing: The Hardwiring of Discriminatory Policing Practices Across Europe. Project Report. European Network Against Racism (ENAR), available: https://e-space.mmu.ac.uk/624446/1/data-driven-profiling-web-final.pdf

Morozov, Evgeny (2013) "Chapter 6: Less Crime, More Punishment," *To Save Everything, Click Here: The Folly of Technological Solutionism*, New York: Public Affairs.

Viewing:
https://citizenlab.ca/2020/09/algorithmic-policing-in-canada-explained/

7)   Data Justice: Social Justice in an Age of Datafication

In this class we consider big data from a social justice perspective, and survey the arguments raised by a broad range of public, private, and civil society actors who are concerned about the potential for big data systems to increase inequality and discrimination.

Required reading:

O'Neill, Cathy (2016) *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*, New York: Crown Publishing Group, 1-31.

Noble, Safiya Umoja (2018) *Algorithms of Oppression*, New York: NYU Press, 1-14.

Redden, Joanna (2018) 'The Harm that Data Do', *Scientific American*, available: https://www.scientificamerican.com/article/the-harm-that-data-do/

Required viewing:

ProPublica (2016) "Episode 4: Artificial Intelligence," Breaking the Black Box, available: https://www.propublica.org/article/breaking-the-black-box-how-machines-learn-to-be-racist?word=Trump

8)   Data Activism and Data for Good

Groups and individuals are developing innovative new ways to use big data for good, and to draw attention to important issues. In this class we consider data activism by looking at some specific examples.

Key Reading:

Sasha Costanza-Chock (2020) "Introduction: #TravelingWhileTrans, Design Justice, and Escape from the Matrix of Domination," *Design Justice*, Cambridge MA: MIT Press, https://design-justice.pubpub.org/pub/ap8rgw5e/release/1

Dillon Lindsey, Walker Dawn, Shapiro Nicholas, Underhill Vivian, Martenyi Megan, Wylie Sara, Lave Rebecca, Murphy Michelle, Brown Phil, and Environmental Data and Governance Initiative. Environmental Justice. December 2017, 10(6): 186-192. https://doi.org/10.1089/env.2017.0020

Lewis, Jason (2021) "From Impoverished Intelligence to Abundant Intelligences," Medium,https://jasonedwardlewis.medium.com/from-impoverished-intelligence-to-abundant-intelligences-90559f718e7f

Viewing

Our Data Bodies: Human Rights and Data Justice, available: https://www.odbproject.org/

ACLU, 2019 Proved We Can Stop Face Recognition Technology, available: https://www.aclu.org/news/privacy-technology/2019-was-the-year-we-proved-face-recognition-surveillance-isnt-inevitable/

Tactical Technology Collective: https://tacticaltech.org/pages/about-us/

9) Automation and the Welfare State

In this class we consider how big data is being used by governments and others in positions of authority through a focused discussion of predictive systems in child welfare.

Required reading:

Benjamin, Ruha (2019) Assessing Risk, Automating Racism, *Science*, 366(6464), p. 421-422.

Eubanks, Virginia (2017) 'The Alleghany Algorithm', *Automating Inequality*, New York: St. Martin's Press, p. 127-174.

Roberts, Dorothy E. (2019) Book Review, Digitizing the Carceral State, Harvard Law Review, https://harvardlawreview.org/wp-content/uploads/2019/04/1695-1728_Online.pdf

10) Data Governance: Policy and Oversight

In this class we consider the different ideas being put forward about the need for greater accountability, oversight, transparency and participation in relation to government and corporate uses of AI and predictive data systems.

Required reading:

Rashida Richardson, Racial Segregation and the Data-Driven Society: How Our Failure to Reckon with Root Causes Perpetuates Separate and Unequal Realities, 36(3) Berkeley Technology Law Journal (2022).

Kuziemski, Maciej and Misuraca, Gianluca (2020) "AI governance in the public sector: Three tales from the frontiers of automated decision-making in democratic settings," *Telecommunications Policy*, 44(6), https://doi.org/10.1016/j.telpol.2020.101976

Required viewing:

https://automating.nyc/

Confronting Black Boxes, NYC Shadow Report, https://ainowinstitute.org/ads-shadowreport-2019.pdf

11) Datafication, Media and Democracy

Fake news, bots, and filter bubbles have all been in the news a lot lately. In this class we consider the political implications of these phenomena, and also discuss how uses of big data are changing political campaigning. In the second half of the class we consider how algorithmic systems are changing media.

Required reading:

Cadwalladr, Carole (2017) 'The great British Brexit robbery: how our democracy was hijacked', *The Observer*, 7 May, https://www.theguardian.com/technology/2017/may/07/the-great-british-brexit-robbery-hijacked-democracy

Nguyen, C. T. (2020) 'Escape the Echo Chamber,' AEON, https://aeon.co/essays/why-its-as-hard-to-escape-an-echo-chamber-as-it-is-to-flee-a-cult

Bennett, C.J. and Lyon, D. (2019). Data-driven elections: implications and challenges for democratic societies . Internet Policy Review,[online] 8(4). Available at: https://policyreview.info/data-driven-elections [Accessed: 20 Aug. 2021].

Viewing:

Oxford Internet Institute (2017) Computational Propaganda Worldwide: Executive Summary, 19 June, https://www.oii.ox.ac.uk/blog/computational-propaganda-worldwide-executive-summary/

12) Artificial Intelligence: Grounding Ethics

In this class we consider the debates about 'data ethics' through a focus on artificial intelligence and the internet of things.

Key reading:

Hoffmann, A.L. (2020) Terms of inclusion: Data, discourse, violence. *New Media & Society*. doi:10.1177/1461444820958725

McStay, Andrew (2019) Emotional AI and EdTech: serving the public good?, Learning, Media and Technology, DOI: 10.1080/17439884.2020.1686016

Amoore, Louise (2020) "Politics and Ethics in the Age of Algorithms," *Cloud Ethics: Algorithms and Attributes of Ourselves and Others,* London: Duke University Press.

13) Data Sovereignty and Decolonizing the Digital

We discuss ongoing movements for decolonization as well as data sovereignty. We also spend time reviewing and reflecting on key ideas and themes to emerge across the course.

Key reading:

Lovett, R., Lee, V., Kukutai, T,. Cormack, D., Carroll-Rainie, S,. & Walker, J. (2019). Good Data Practices for Indigenous Data Sovereignty and Governance. In Good Data, Daly, A., Devitt, SK,. & Mann, M (eds), Institute of Network Cultures, Amsterdam.

Lewis, J. E., Arista, N., Pechawis, A., & Kite, S. (2018). Making Kin with the Machines. Journal of Design and Science. https://doi.org/10.21428/bfafd97b

Viewing:

British Columbia's First Nations Data Governance Initiative,
https://www.bcfndgi.com/