Last Updated: Mar/29/2025

DENISON

WGST286/DA286-01

When AI Meets Feminism: Critical Perspectives and Equitable Creations

Spring 2025 | Knapp 301 | Professor Yao

MWF 10:30am-11:20am

Instructor	Email	Student Hours
Man Yao (she/her)	many@denison.edu	Weds 2:30PM-3:30PM; Thurs: 2:00PM-3:30PM or by appointment
Dr. Yao is an assistant professor in the Women's and Gender Studies program and a quantitative sociologist who studies gender inequality in our digital age. Off-campus, you might find her jamming to Taylor Swift on the piano or guitar.		
Teaching Assistant: Jianing Fu		Knapp 201 Mons: 1:30pm-2:30pm [updated] Tues: 12:00pm-2:oopm
Jianing Fu is a junior majoring in economics and computer science. She likes watching movies and playing games in spare time. She would love to help everyone this semester!		

COURSE DESCRIPTION

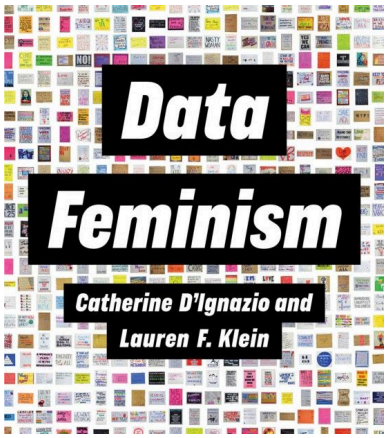
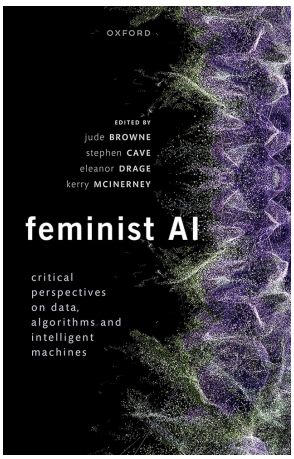
Can AI (artificial intelligence) be feminist? The recent explosion in data, algorithms, and AI systems pushes boundaries of technology in human society, but often exacerbates existing inequalities and generates social harms. This course, which bridges together students from Data Analytics (DA) and Women's and Gender Studies (WGST), will explore why feminist AI is needed and how it is possible. We will engage with intersectional feminist scholarship to identify the unequal power structures within AI systems, ranging from facial recognition technologies and decision-making algorithms to the recent generative AI tools. We will also apply feminist insights to produce actionable strategies for designing more equitable and inclusive AI technologies. Over the course of the semester, we will learn and practice data analytics and visualization skills, by applying feminist principles discussed in the class to real-world examples. Students will also form interdisciplinary groups to complete a final research project tackling AI and social justice, which allows them to apply their unique expertise. For course materials and assignments, we will use the programming language Python and the Jupyter platform. Participating students in DA should have some familiarity with Python. No prior coding experience is required for WGST students, but an openness to engage with technical tools is essential.

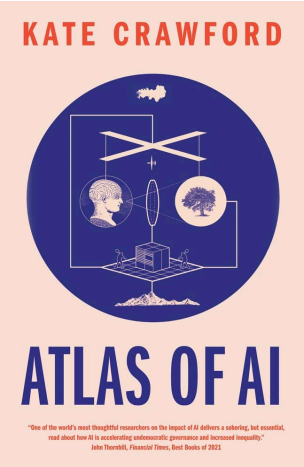
COURSE GOALS

1. To learn intersectional feminist critiques of data, algorithms, and AI technologies;
2. To learn and expand quantitative and digital toolkits including data collection, data analytics, and visualization using programming language (e.g., Python) and other digital tools (e.g., OpenAI API);
3. To identify potential social harms of AI technologies in systematic ways and develop strategies for equitable AI design by applying feminist principles to real-world data challenges.
4. To build collaborative skills through interdisciplinary teamwork and cultivate an appreciation for the integration of technical expertise and feminist insights.

REQUIRED TEXTS

All readings will be available online, via Canvas or through online open access. Most readings will be adapted from the following three books. You do not need to purchase these books, as we will only use selected portions. Other readings include news articles and journal/conference papers in feminist/critical data studies, computational social science, and digital humanities.

	D'ignazio, Catherine, and Lauren F. Klein. *Data feminism*. MIT press, 2023.
	Browne, Jude, Stephen Cave, Eleanor Drage, and Kerry McInerney, eds. *Feminist AI: Critical perspectives on algorithms, data, and intelligent machines*. Oxford University Press, 2023.



Crawford, Kate. *The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. Yale University Press, 2021.

CLASS TECHNOLOGY

- Hardware: Laptops should be sufficient, computer lab or server available if needed.
- Programming: We will mainly use Python 3 (jupyter notebooks) for in-class coding workshops on each Friday. Additional software (e.g., Google Sheets, R, StoryMap, and other web-based tools) will also be needed for hands-on class activities and class assignments. No worries if you don't know these yet! Your professor will provide access to and instructions of these tools.
    - Additional resource for learning Python for beginners: Python is for Everybody
- Communication: Canvas and Google Drive will be the main places for course communication. I will update the syllabus as needed on Canvas, so make sure to check information on Canvas timely. Additional information and resources from class time, assignments, slides, and additional readings will be posted on Canvas or as links to Google Drive.

LIST OF GRADED ASSIGNMENTS

- Class Participation 10%
- Reading Assignments 15%
- Friday Coding Workshops (8) 20%
- Assignment #1: The Quantified Self 15%
- Assignment #2: The Geography of AI 15%
- Assignment #3: Final Group Project 20%
- 1:1 Meetings with Dr. Yao (2) 5%
- [optional] Extra credit opportunities to be announced on Canvas

DESCRIPTIONS OF GRADED ASSIGNMENTS

Class Participation 10%

Your presence and participation in each class is expected and valued. I will record your participation grade after each class according to the following criteria[1]:

- **Preparation**: Reading and reviewing any assigned materials before each class.
- **Engagement**: Being verbally and nonverbally engaged during class.
- **Focus**: Avoiding distractions during class, particularly by the wonders of the internet.
- **Classwork**: Most class sessions will include in-class worksheets or brief quizzes based on the readings. They are designed to be simple, not high-stakes testing. You should easily answer them, if you have done the readings.
- **Collaborations**: You will frequently work and discuss with partners or small groups in class sessions. I expect everyone to be a team collaborator during these sessions.
- **Specificity**: Referring to specific ideas from readings and prior class discussions when contributing to class discussion and/or in conversations during office hours.

Reading Assignments 15%

Readings are essential in this class (yes, even more so than coding!). These chapters, articles, papers, and reports etc. are carefully compiled with effort (considering how new this field is) and are designed to go deeper into topics than you might obtain from headlines on social media. They will span in the fields of feminist/critical data studies, computational social science, natural language processing, and digital humanities. Importantly, they may also serve as models of work in your three big assignments in this class. To motivate you carefully to engage with the readings, you will be required to write summary essays of materials in two class days and guide reading discussions in one class session. I will provide a sign-up sheet for selecting class weeks after the introductory unit of the class.

- Summary essays(2): Each student will select materials of two days (typically M&W) and write two summary essays (one page, single space for each) for materials on these two days. You should submit your summary essays before the start of the class in which the materials will be discussed. Each summary essay should respond to the three questions:
    - What are the three most important aspects of the materials selected (e.g., concepts, issues, evidence etc.)?
    - What are some initial reactions would you like to share for the selected readings?
    - Write at least one substantial question we could discuss as a group during the class time. Make sure to elaborate how you develop this question based on the text.
- Reading guide (1): In addition to the summary essays, you are also required to prepare a five-minute presentation of the "Big idea" of one class day's selected topic and readings. You should end the presentation with the substantial question(s) you develop in the essay. Considering the short time period, make sure to choose wisely and focus on maybe 1-2 key points of the readings in your presentation, which are related to the question(s) you develop.

[1] Adapted from Dr. Lauren Klein at Emory University and Dr. Sarah Supp at Denison.

Friday Coding Workshops 20%
We will hold 8–10 in-class coding workshops (CW) during Friday's class sessions. Please bring your laptop each Friday. Each workshop will begin with an introduction to a scenario and a data science task, followed by a guided walkthrough of a Jupyter Notebook file. You won't need to write Python code from scratch; instead, we'll work through the task collaboratively. CW assignments will be based on the workshop's notebook and may involve applying the discussed methods to a new dataset or answering questions about the code and results. These assignments are designed to reinforce your understanding of concepts through computational tools rather than evaluate your coding proficiency. Our TA will be available during each workshop and hold office hours to provide hands-on assistance.

Each CW assignment will be due by the following Wednesday. The last five are designed to lead up to the final project, and may be submitted in your project group.

Assignment #1: The Quantified Self [2] 15%
You will spend 5-6 weeks during the early phase of the semester to record data about one aspect of your daily life (e.g., time spent on different activities, daily mood rating, daily productivity rating, etc). After recording and organizing the self data in Google Sheets, you will be asked to create data visualizations to communicate that data to readers and to write a reflective essay about self-tracking culture and datafication of human behaviors. Some inspirations and examples could be found here. I will provide a more detailed assignment sheet after the introductory unit of the course. Additionally, you will be asked to do a short presentation to share your self-data visualization and reflections with the class.

Assignment #2: The Geography of AI StoryMap 15%
In this assignment, you will use the KnightLab's StoryMap to create a non-linear story about the material and human resources needed to create and maintain one AI product. In this story map, you will trace the geographic locations of both hardware and software used in this AI product. The goal is to make *hidden resources and labor* in the AI industry visible and reflect on the larger social implications. A detailed assignment sheet will be distributed later in the semester. We will also have class time for students to share their story map with the class.

Assignment #3: Final Group Project: Evaluating Generative AI Models 20%
Students will work in interdisciplinary groups to investigate biases and potential harms in AI-generated data. Using the OpenAI API, each group will collect original data and conduct statistical analyses to identify specific biases, in domains such as gender, racial, cultural, or socioeconomic categories. In the final presentations and papers, groups will summarize their findings, apply theoretical knowledge from the course to propose strategies for mitigating these biases, and critically reflect on the strengths and limitations of these approaches in challenging power within AI systems. Throughout the semester,

[2] Assignment #1 and #2 are adapted from the Data and Society course taught by Dr. Laura Nelson at University of British Columbia.

students will engage with related research and develop quantitative skills needed for data collection, analysis, and interpretation in the final group project.

1:1 Meetings with Dr. Yao (2) 5%
Come to talk to me! For us to get to know each other better, I ask each of you to come to my office hours at least *twice* throughout this semester. Each meeting will take about 15-20 minutes. Note that the first meeting should be scheduled before *March 12, 2025*, and the second meeting should be after this date. In addition to these two required ones, you are also encouraged to come to other meetings with me to discuss topics you are interested in.

COURSE GRADING

A+:	97%+	A:	93-96.9%	A-:	90-92.9%
B+:	87-89.9%	B:	83-86.9%	B-:	80-82.9%
C+:	77-79.9%	C:	73-76.9%	C-:	70-72.9%
D+:	67-69.9%	D:	63-66.9%	D-:	60-62.9%

F: below 60

COURSE POLICIES AND EXPECTATIONS

Attendance Policy
Attendance in every class is mandatory and my personal expectation for each of you. You are allowed to miss *three* classes throughout the semester without penalty. To have a missed class without penalty, you must email me **in advance of the class;** otherwise, penalty would apply. For any missed classes, you are responsible for reviewing the material covered and completing the assigned work. Beyond the three allowed absences, each additional absence will result in a 2% deduction from your final grade. For allowed absences, documentation must be submitted via email prior to the start of class. Allowed absences may include illness or other legitimate conflicts as outlined in the Denison catalog. Such activities might include course-related field trips, fine arts performances (but not rehearsals), and varsity sports contests (both regular season and all postseason contests, but not scrimmages or practices).

You are also expected to be in class on time. If you are more than 10 minutes late to class without prior notice to me, you will receive one unexcused tardiness. Each unexcused tardiness will result in 1% deduction of your final grade.

Preparation & Assigned Readings
A four-credit course requires 12 hours of work per week (four hours of classroom or direct faculty instruction and eight hours of out-of-class student work) over a period of 14 weeks of instruction plus one week of exams. Make sure to complete the readings before each class. I also highly encourage you to take reading notes as you go through them. They can be very helpful for you to concentrate during reading. Digital notes are quite popular now, and there is plenty of note-taking software you could

choose. OneNote which is free through Denison student accounts is recommended. I use Notion, a flexible note-taking and project management software.

Participation
Participation in class activities and contributions to class discussions are part of your grade and crucial for your success in this class. Generally, effort is far more valuable than finding the correct answers, especially when dealing with complex issues where clear solutions may not always exist. Participation is not limited to speaking up in class. In order to get a high grade for class participation, refer to the six criteria I listed under Descriptions of Graded Assignments.

Make sure to bring the required text and related notes to the class to facilitate the participation. Also bring your digital devices to the class to participate in certain in-class activities. Using digital devices for activities unrelated to the class are not allowed. Participation outside of regular class time is also expected. Significant feedback on assignments is a core component of this course. Students are expected to review instructor feedback and incorporate that into their future work.

Discussion and Communication Guidelines
This course deals with a variety of complex issues, and you might encounter differences or even conflicts in opinions either with me or with other classmates in this course. I hope everyone in this class feels safe to express their opinions. We will also have a short workshop to work on making our own community norms in class. Keep in mind that your classmates and professor come from diverse backgrounds. Each of us should contribute to building a supportive learning community by respecting other people's opinions. Listening is always the priority. Being open-minded and willing to accept new ways of thinking are also encouraged. If you disagree with or have a different perspective with me or a classmate, please do so in an informed and respectful way.

Late Assignments
Assignments will be penalized 10% for each day that has passed since the due date (e.g.
If you turn in an assignment one day late, you can only receive up to 90% of the original points. If it is two days late, you can receive up to 80% of the original points.) Assignments received after the deadline, even on the day it is due, will be considered late. Late assignments will not be accepted after the last day of classes.

Content Warning
Some content in this course may include descriptions or scenes depicting violence, war, or sexual violence, which could be triggering for some students. Please take care of yourself in these cases and prioritize your wellbeing. If needed, feel free to leave the classroom, contact Counseling and Consultation Services, or contact the professor.

Email Communication

When emailing me and sending me a Canvas message, add "WGST286" or "DA286" in the subject line. Properly address the message (e.g., "Dr. Yao" or "Professor Yao") and sign your name at the end of the message. I try my best to reply to your emails within 48 hours on days when the class is in session.

🔥Generative AI Tools🔥

While we are exploring the exciting but also uncertain world of the recent generative AI systems in this course, you are probably wondering whether you could use these tools to help you to complete assignments in this course. Like many fields of human life we will discuss in this course, the emergence of these tools will change the process of teaching and learning in an unprecedented way, and the whole society is still figuring out the directions of these changes. I am highly aware of and understand the amount of uncertainties, confusions, and dilemmas you are facing on a daily basis under today's technological changes. As a teacher, an AI researcher, and a frequent user of these tools myself, I am also in the process of navigating how we can better incorporate these tools into teaching to facilitate effective learning processes. Thus I will try my best to offer guidance on this matter based on my current knowledge and will design this course in a way that equips students with capabilities to navigate the new social and technological environment. As a starting point, here are a few reminders you should keep in mind whenever you consider using one generative AI tool throughout this course:

- *Consult and reflect on Bloom's Learning Taxonomy and specific course goals* to identify how the usage of AI tools help you achieve your learning goals. Lots of assignments designed in this course, including reading, writing, and coding, will help you to achieve these learning goals. If you are only using AI to increase your speed of finishing assignments, you are not working towards these goals.
- *AI generates average work.* Current research in educational technologies shows that the AI-generated work typically can only receive an average grade in a number of different assignment types.[3] To achieve excellence, substantial human knowledge and decisions are required, which means that AI will not learn for you! To gain the knowledge and taste required to distinguish between good and bad contents, you should follow the expectations of this course to engage with the materials and make them your own knowledge.
- *AI makes mistakes and sometimes gives stupid solutions.* Related to the last point, human knowledge and experience are required to assess the credibility of AI-generated content. In writing, AI is known to offer factually-wrong answers; in coding, AI may only offer an outdated version of solution. **Therefore, you should never use AI to produce your final work**. Substantial thinking and assessment are needed before you could decide whether to trust the AI-generated content.

With these reminders in mind, here is the policy regarding AI tools in this course:

- **Submit a formal disclosure statement about GenAI usage**, for each assignment that has been informed by AI tools. This statement should include 1) how the AI tools were used (e.g.,

[3] Bowen, José Antonio, and C. Edward Watson. *Teaching with AI: A Practical Guide to A New Era of Human Learning*. Johns Hopkins University Press, 2024.

to generate ideas, editing language, outlining, providing summaries); 2) how the AI tools help or do not help improve the quality of the work.

- Occasionally, I will use AI tools to facilitate class activities and prepare class materials. In these cases, I will let you know and provide a model for how to appropriately credit AI contributions in our daily work. I encourage us to exchange experiences of using AI and explore the best practices for transparency and ethical use together.
- Suspected cases of unauthorized use will be considered as a violation to **Academic Integrity** and reported.

UNIVERSITY POLICIES AND RESOURCES

Academic Credit Policy

This course adheres to Denison's Academic Credit Policy. Direct Faculty Instruction includes lecture, class discussion, library sessions outside of regular class time, use of Discussion Board (Canvas), faculty-recorded lectures or laboratory engagements, required outside speakers, detailed feedback on student writing and oral presentations, and one-on-one meetings with students.

Academic Integrity

Proposed and developed by Denison students, passed unanimously by DCGA and Denison's faculty, the Code of Academic Integrity requires that instructors notify the Associate Provost of cases of academic dishonesty. Cases are typically heard by the Academic Integrity Board which determines whether a violation has occurred, and, if so, its severity and the sanctions. In some circumstances the case may be handled through an Administrative Resolution Procedure. Further, the code makes students responsible for promoting a culture of integrity on campus and acting in instances in which integrity is violated. Academic honesty, the cornerstone of teaching and learning, lays the foundation for lifelong integrity.

Academic dishonesty is intellectual theft. It includes, but is not limited to, providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for evaluation. This standard applies to all work ranging from daily homework assignments to major exams. Students must clearly cite any sources consulted—not only for quoted phrases but also for ideas and information that are not common knowledge. Neither ignorance nor carelessness is an acceptable defense in cases of plagiarism. It is the student's responsibility to follow the appropriate format for citations. Students should ask their instructors for assistance in determining what sorts of materials and assistance are appropriate for assignments and for guidance in citing such materials clearly.

Note on Technology: Unauthorized use of technology (including, but not limited to, artificial intelligence sites and translation programs) in the preparation or submission of academic work can be considered a form of cheating and/or plagiarism. Instructors may at their discretion create assignments that incorporate the use of supporting technologies and will inform students of acceptable uses of technology in their courses. It is the responsibility of the student to ask the instructor for clarification

whenever they are unclear about the parameters of a specific assignment and to understand that presenting the work of artificial intelligence as your own constitutes a violation of Denison's Code. Cases of suspected inappropriate use of technology may be submitted to the Academic Integrity Board to initiate an investigation of academic dishonesty.

For further information about the Code of Academic Integrity, see http://denison.edu/academics/curriculum/integrity.

Student Accommodations

Students with a documented disability should complete a Semester Request for Accommodations through their My Accommodations app on MyDenison. It is the student's responsibility to contact me privately as soon as possible to discuss specific needs related to your learning in the classroom and studying. I rely on the Academic Resource Center (ARC) located in 020 Higley Hall, to verify the need for reasonable accommodation based on the documentation on file in that office. Reasonable accommodation cannot be applied retroactively and therefore ideally should be enacted early in the semester as they are not automatically carried forward from a previous term and must be requested every semester.

Logistic arrangements for testing-related accommodations should be made *at least* a week in advance of an evaluation and follow the Exam Accommodation Policy.

Reporting Sexual Assault

Essays, journals, and other coursework submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees are required by University policy to report allegations of discrimination based on sex, gender, gender identity, gender expression, sexual orientation, or pregnancy to the Title IX Coordinator. This includes reporting all incidents of sexual misconduct, sexual assault, and suspected abuse/neglect of a minor. Further, employees are to report these incidents that occur on campus and/or that involve students at Denison University whenever the employee becomes aware of a possible incident in the course of their employment, including via coursework or advising conversations. There are others on campus to whom you may speak in confidence, including clergy and medical staff and counselors at the Wellness Center. More information on Title IX and the University's Policy prohibiting sex discrimination, including sexual harassment, sexual misconduct, stalking and retaliation, including support resources, how to report, and prevention and education efforts, can be found at: https://denison.edu/campus/title-ix.

Multilingual Learning

Students who use English in addition to other languages are welcome to use the resources available at the Multilingual Learning Office (MLO). The MLO includes Morayo Akinkugbe, PhD, the Assistant Director of Multilingual Programming and Support; Anna Adams, the English Language Support Specialist; and the student consultants who work with them. They are all trained and experienced in

helping students address the different issues that arise when working in more than one language. If English is not your first or only language, please consider utilizing this resource, which is available to ALL Denison students. Dr. Akinkugbe, Ms. Adams, and the student consultants offer a variety of support for L2 students, including consulting with you about your written language (grammar, syntax, word-choices), developing strategies to manage your reading assignments, assisting with class conversation and presentations, and helping to devise ways to develop and effectively use all your skills in English. You can set up an appointment via https://denisonuappointments.as.me/mlo, or by emailing the Multilingual Learning Office directly at englishhelp@denison.edu.

Writing Center

Every writer–no matter the course or their experience level–needs a reader and benefits from deep conversation about their work! At the Writing Center, student consultants are eager to support you at any stage of the writing process including (but not limited to): deciphering assignment instructions, brainstorming, developing an argument, organizing your ideas, integrating research and sources, working with faculty feedback, and/or polishing a draft. Consultants, who are themselves experienced writers from a range of areas of study, are specially trained to support writing for any course or purpose from lab reports, research papers, and informal writing assignments to cover letters, personal statements, and other application materials. The Center welcomes writers from all backgrounds and levels of college preparation. Appointments can be scheduled for 25 or 50 minutes at https://denison.mywconline.com/ and take place in-person in the Atrium level of the Library (A22).

COURSE SCHEDULE AT A GLANCE

Dates	Topic	Coding workshop	Milestone
Unit 1. Feminism, Datafication, and Anatomy of AI			
Week 1 1/22-1/24	Syllabus, introductions; Feminism		
Week 2 1/27-1/31	Data feminism.; Datafication	Install Anaconda; Intro to Jupyter and Python exercises	
Week 3 2/3-2/7	The Quantified Self movement; Anatomy of AI	Python intro exercises cont.; StoryMap tutorial	Quantified Self track begins
Unit 2. Critical Perspectives: Examining Power in AI			
Week 4 2/10-2/14	Binary classification and hierarchies	AI-powered gender prediction tools	Reading guide begins Due: CW #1
Week 5 2/17-2/21	Invisible labor and demographic imbalance in AI workforce	Intersectional inequality in science	Due: CW # 2
Week 6 2/24-2/28	Data representation; Algorithm objectivity		Due: CW # 3
Week 7 3/3-3/7	Surveillance capitalism	The Quantified Self presentation	Quantified self essay
Week 8 3/10-3/14	Generative AI and how we got here	Introduction to OpenAI API	
3/17-3/21 SPRING BREAK! 🌳🌿🌸			
Week 9 3/24-3/28	Generative AI evaluation and implication	Evaluating GPT-4 in health care usage (1)	Due: CW # 4
Unit 3. Actionable Strategies: Toward Feminist and Equitable AI			
Week 10 3/31-4/4	The Geography of AI presentations	Evaluating GPT-4 in health care usage (2)	Due: CW # 5 & Geography of AI

Week 11 4/7-4/11	Challenging power; Participatory AI design	Evaluating GPT-4 in health care usage (3)	Due: CW # 6
Week 12 4/14-4/18	Incorporating emotion and embodied experience	Final project brainstorming	Due: CW # 7
Week 13 4/21-4/25	Embracing pluralism; Considering context	Final project dataset	Due: final project worksheet
Week 14 4/28-5/5	Course wrap-up; Course evaluation; Final project presentations; Last day of class	Final project workshop	Due: CW # 8 Feedback for final project
Finals	Final project paper due Saturday, 5/10		

CLASS-BY-CLASS SCHEDULE

Class schedule subject to change.

* Please consult Canvas for the most updated schedule.*

Unit 1. Feminism, Datafication, and Anatomy of AI

1. Wed, Jan 22. Introduction and Course Overview

In class: community norms discussion

2. Fri, Jan 24. What is Feminism(s)?

Readings:

- hooks, bell. 2000. "Feminist Politics: Where We Stand."
- Lorde, Audre. 1983. "There Is No Hierarchy of Oppressions."
- Limpangog, Cirila P. 2016. "Matrix of Domination (by Patricia Hill Collins)."

In class: Intersectional identities exercise

3. Mon, Jan 27. Data Feminism and Feminist AI

Readings:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Introduction: Why Data Science Needs Feminism." (pp. 1-20)

Optional:

- Klein, Lauren, and Catherine D'Ignazio. 2024. "Data Feminism for AI."

In class: reading guides sign-up sheet

4. Wed, Jan 29. History of Data(fication) and AI Overview

Readings:

- Cieslik, K., & Margócsy, D. (2022). Datafication, Power and Control in Development: A Historical Perspective on the Perils and Longevity of Data. Progress in Development Studies, 22(4), 352-373.

Optional:

- The brief history of artificial intelligence: the world has changed fast — what might be next?

5. Fri, Jan 31. Software Setup

In class: Install / Update Anaconda; Introduction to Jupyter and Python exercises

6. Mon, Feb 3. The Quantified Self Movement

Readings:

- Lupton, Deborah. 2014. "Self-tracking Cultures: Towards a Sociology of Personal Informatics."

In class: The Quantified Self assignment brainstorming

7. Wed, Feb 5. The Anatomy of AI

Note: The Quantified Self tracking begins 📝🤔💭

Readings:

- Crawford, Kate, and Vladan Joler. 2018. "Anatomy of an AI System."

Optional:

- Crawford, Kate. 2021. Atlas of AI. "Introduction" (pp. 1-21)
- Hurler, Kevin. 2023. "Google Is Really, Really Thirsty."

8. Fri, Feb 7. Non-linear Story and StoryMap Tools Tutorial

In class: Intro to Python exercise cont.;StoryMap tutorial; Geography of AI brainstorming;

Unit 2. Critical Perspectives: Examining Power in AI

9. Mon, Feb 10. Who Benefits? Who is Harmed?

Note: Reading guides begin

Readings:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Chapter 1 The Power Chapter." pp.21-47.

10. Wed, Feb 12. Binary Classification and Hierarchies

DUE: CW#1, Intro to Jupyter and Python exercises

Readings:

- Crawford, Kate. 2021. Atlas of AI. "Classification" (pp. 123-149)

11. Fri, Feb 14💛. The Unequal Distribution of Misclassification
In class: calculating error rates of AI-powered gender prediction tools

12. Mon, Feb 17. Who is Credited? Who is Invisible?
Readings:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Chapter 7 Show Your Work." (pp. 173-201)

Optional:

- "Across China, an Unseen Rural Workforce Is Shaping the Future of AI." in Six Tone
- Adrienne Williams, Milagros Miceli, and Timnit Gebru. 2022. "The Exploited Labor Behind Artificial Intelligence." NOEMA
- Carlos Toxtli, Siddharth Suri, and Saiph Savage. 2021. "Quantifying the Invisible Labor in Crowd Work." CSCW

13. Wed, Feb 19. AI Workforce Injustices
DUE: CW #2

Readings:

- Wajcman, Judy and Erin Young. 2023. "Feminism Confronts AI: The Gender Relations of Digitalisation". In: Feminist AI.

14. Fri, Feb 21. Intersectional Inequality in Science
In class: analyzing demographic identities and scientific impacts of U.S. scientific workforce

15. Mon, Feb 24. Data Representation in AI
Readings:

- Suchin Gururangan, Dallas Card, et al., "Whose Language Counts as High Quality? Measuring Language Ideologies in Text Data Selection," EMNLP (2022)

Optional:

- Li Lucy, Suchin Gururagnan, et al., "AboutMe: Using Self-Descriptions in Webpages to Document the Effects of English Pretraining Data Filters," Association for Computational Linguistics (ACL) 2024.
- Mimi Onuoha. 2024. On Missing Data Sets.

16. Wed, Feb 26. Algorithm Objectivity
DUE: CW #3

Reading:

- Arcas, Blaise Ageray, Margaret Mitchell, and Alexander Todorov. 2023. "Physiognomy in the Age of AI". In: Feminist AI.

17. Fri, Feb 28. Algorithm Objectivity (continued)

18. Mon, Mar 3. Surveillance Capitalism

In class: Ohio Supercomputer tutorial

Readings:

- Crawford, Kate. 2021. Atlas of AI. "State" (pp. 181-209)

19. Wed, Mar 5. The Quantified Self Presentation (1)

DUE: CW #4

20. Fri, Mar 7. The Quantified Self Presentation (2)

DUE: The Quantified Self essay

21. Mon, Mar 10. Generative AI and How We Got Here (1)

Readings:

- Visual Storytelling Team and Madumhita Murgia. "Generative AI exists because of the transformer." The Financial Times (2023)

Optional:

- Arseniev-Koehler, A. 2024. "Theoretical Foundations and Limits of Word Embeddings: What Types of Meaning can They Capture?" Sociological Methods & Research, 53(4), 1753-1793.

22. Wed, Mar 12. Generative AI and How We Got Here (2)

Readings:

- Emily M. Bender, Timnit Gebru et al., "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?🦜" In Proceedings of the 2021 ACM conference on fairness, accountability, and transparency (pp. 610-623).

23. Fri, Mar 14. Introduction to ChatGPT API

In class: Querying LLM via language and code

24. Mon, Mar 24. Generative AI and Social Justice

Readings:

- Jennifer Rhee. 2023. "From ELIZA to Alexa: Automated Care Labour and the Otherwise of Radical Care." In: Feminist AI.

Optional:

- Humlum, Anders, and Emilie Vestergaard. 2025. "The unequal adoption of ChatGPT exacerbates existing inequalities among workers." Proceedings of the National Academy of Sciences.
- Capraro et al. 2024. "The impact of generative artificial intelligence on socioeconomic inequalities and policy making". PNAS Nexus.

25. Wed, Mar 26. Generative AI Evaluation

DUE: CW #4

Readings:

- Tao, Yan, et al. 2024. "Cultural bias and cultural alignment of large language models." PNAS Nexus.

Optional:

- Liu, Lucy and David Bamman. 2021. "Gender and Representation Bias in GPT-3 Generated Stories."
- Luo et al. 2024. "Othering and Low Status Framing of Immigrant Cuisines in US Restaurant Reviews and Large Language Models."
- Walsh et al. 2024. "Sonnet or Not, Bot? Poetry Evaluation for Large Models and Datasets."
- Fang et al. 2024. "Bias of AI-generated content: an examination of news produced by large language models."
- Yang et al. 2024. "Unmasking and quantifying racial bias of large language models in medical report generation."
- Zhou, D., Zhang, Y. "Political biases and inconsistencies in bilingual GPT models—the cases of the U.S. and China."

26. Fri, Mar 28. Evaluating GPT-4 in Healthcare Usage (1)

In class: prompts and data cleaning

Unit 3. Actionable Strategies: Toward Feminist and Equitable AI

27. Mon, Mar 31. The Geography of AI Presentation (1)

28. Wed, Apr 2. The Geography of AI Presentation (2)
DUE: CW #5

29. Fri, Apr 4. The Geography of AI Presentation (3)

30. Mon, Apr 7. Challenging Power toward Justice
Readings:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Chapter 2 Collect, Analyze, Imagine, Teach." (pp. 49-72)

Update: In class: Conceptual map + final group project brainstorming

31. Wed, Apr 9. Alternative and Participatory AI design
DUE: CW #6

Readings:

- Apolline Taillandier. 2023. "AI in a Different Voice: Rethinking Computers, Learning, and Gender Difference at MIT in the 1980s". In: Feminist AI.

32. Fri, Apr 11. Evaluating GPT-4 in Healthcare Usage (2)
In class: quantified data visualization and interpretation

33. Mon, Apr 14. The Missing Emotion and Embodiment
Readings:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Chapter 3 On Rational, Scientific, Objective Viewpoints from Mythical, Imaginary, Impossible Standpoints." (pp. 73-96)

34. Wed, Apr 16. The Commodified Emotion and Embodiment
DUE: CW#7

Readings:

- Neda Atanasoski. 2023. "Feminist Technofutures: Contesting the Ethics and Politics of Sex Robots and AI." In: Feminist AI.

35. Fri, Apr 18. Final Project Brainstorming

In class: final group project topic brainstorming/feedback and approval by professor

36. Mon, Apr 21. Embracing Pluralism

Readings:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Chapter 5 Unicorns, Janitors, Ninjas, Wizards, and Rock Stars." (pp. 125-148)

37. Wed, Apr 23. Considering Context

Readings:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Chapter 6 The Numbers Don't Speak for Themselves." (pp. 149-172)

38. Fri, Apr 25. Final Project Dataset & Workshop

In class: data collection prompts and codes for final project

39. Mon, Apr. 28. Inclusive Design and Course Wrap-up

Optional:

- Sasha Costanza-Chock. 2023. "Design Practices: 'Nothing About Us Without Us'". In: Feminist AI.

40. Wed, Apr 30. Course Wrap-up and Evaluations
DUE: CW#8

Optional:

- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Our Values and Our Metrics for Holding Ourselves Accountable." (pp. 215-222)
- D'Ignazio, Catherine and Lauren Klein. 2021. Data Feminism, "Conclusion: Now Let's Multiply." (pp. 203-214)

41. Fri, May 2. Final Project Analysis Workshop

In class: course evaluations

42. Mon, May 5. Final Project Presentation

Final Project Paper Due: Sat, May 10.