

AI in Media and Society

JOU 3365 | Fall 2024 | Section 23523 (AI01)

Monday, period 7 (1:55–2:45 p.m.) — Monday meeting only twice in the semester

Wednesday, periods 7 & 8 (1:55–3:50 p.m.) — Class discussion & in-class activities: synchronous

Instructor: Mindy McAdams, Professor, Department of Journalism

Email: mmcadams@ufl.edu

Office: 3049 Weimer Hall

Office hours: Tuesday 1–3 p.m. in my office | or by appointment

Office phone: (352) 392-8456 (NOTE: Email is better. Much better.)

Website: UF Canvas LMS

Course Description

Gain an understanding of artificial intelligence and machine learning as they apply to the media professions, including journalists reporting on AI. Explore major developments in AI technologies as covered by the mass media. Learn to detect hype and exaggeration in descriptions of AI's promises and potential risks and dangers. Examine use of AI systems in finance, healthcare, hiring decisions, housing, policing, etc.

Prerequisites: None

Weekly topics and deadlines: See page 8, "Course Schedule and Required Work."

Course Objectives

At the end of the course, students should be able to:

1. Evaluate news reports and corporate claims about AI systems, noting when claims are poorly supported or likely to be exaggerated.
2. Explain how biases come to be "baked into" various AI systems, consequences of AI biases, and how biases could be reduced or eliminated.
3. Describe uses of AI systems in finance, healthcare, hiring decisions, housing, policing and other domains, based on news reports.
4. Differentiate between machine learning and other types of AI.
5. List limitations of trained AI systems used for image recognition, question answering, and content generation, among other applications.

6. Define and describe fundamental structures related to AI, such as algorithms, models, neural networks.
7. Summarize the concept of artificial intelligence used in computer science/mathematics/philosophy — as opposed to science fiction concept of AI.
8. Define and describe common concepts related to AI, such as “AI Spring,” “weak AI,” “artificial general intelligence.”
9. Explain the uses of some well-known datasets used in machine learning such as MNIST and ImageNet.
10. Describe generally the operations and structure of neural networks for tasks involving images or language.

Attendance and Attitude

Students are expected to show respect for one another and for the instructor by arriving before the class starting time. Attendance and participation are expected. If you have been absent, you are responsible for finding out about any missed material by consulting another student and/or going to the instructor’s office hours and/or making an appointment to meet online with the instructor.

There is a two-period SYNCHRONOUS class meeting every week in this course.

Please do not distract yourself during class. Reading and writing text messages, social media posts, watching videos, etc., during class means you will miss things that might affect your grade in the course. Give your full and undivided attention to anyone who is speaking in class, *including your fellow students*. Another student might ask a question that will help you, if you are listening.

Notetaking on paper is highly recommended. Research has shown that our thinking about new ideas and also our retention are improved when we *write* notes about new material rather than typing on a laptop or phone. This applies to material you read as well as lectures and other videos you watch.

UF Attendance Policies

> <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Course Deadlines and Makeup Work

Deadlines for quizzes, exams and all other coursework are in Canvas. Late assignments are not accepted unless an emergency can be documented or other contingencies specifically listed in the **UF Attendance Policies** (see link above). **This means that an assignment submitted late is graded as a zero.** Assignments are not accepted via email unless requested by the instructor. If an illness or a personal emergency prevents you from completing an assignment on time, advance notice and written documentation are required. If advance notice is not possible because of a genuine emergency, written documentation will be required.

No work for “extra credit” is accepted.

NOTE: Many assignment deadlines in Canvas are set for 11:59 p.m. If you submit after the deadline, your assignment is late. Your inability to upload *at the last minute* is not a valid excuse for lateness.

Please note that specific attendance circumstances such as religious holidays, illness, sports, and field trips for other courses are covered under the **UF Attendance Policies** *linked above*.

Details about missing in-class assignments due to absence are below, under “Course Requirements and Grading Policies.”

Academic Dishonesty

Academic dishonesty of any kind is not tolerated in this course. It will be reported to the student’s department chair AND to the university’s Dean of Students—and **it will result in a failing grade for this course.** A formal report of the offense will be filed with the university’s Dean of Students.

Academic dishonesty includes, but is not limited to:

- Using any work done by another person *or automated system, such as an AI text generator*, and submitting it for a class assignment, quiz, or exam.
- **Submitting work you did for another class or course.** You must not “double dip.”
- Copying and pasting text written by another person *or automated system* without use of quotation marks AND complete attribution, including a URL (online) or page number and complete citation (printed works).
- Paraphrasing text written by others, such that it constitutes de facto plagiarism (e.g. word substitutions).
- Sharing answers to exams or quizzes online or with anyone.

A Note About ChatGPT and Similar AI Systems

If the instructor suspects that a student used an AI system (such as ChatGPT) to generate text used in an exam answer, research paper, or project, the student will be subject to **an oral examination** (in Zoom) which will be recorded. If the student is unable to adequately answer questions related to the suspect material(s), a violation of the UF Student Honor Code will be assumed and the above penalties will be applied. Refusal to submit to a recorded oral exam will be taken as an admission of the violation.

UF Student Honor Code

> <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

You are strongly encouraged to read the rubrics for exams and for the research paper/project so that you understand what your instructor in this course expects from you.

Required Book, Videos and More

Students are required to read this book:

Artificial Intelligence: A Guide for Thinking Humans, by Melanie Mitchell (2019)
<https://www.amazon.com/Artificial-Intelligence/dp/0241404835>

All students are expected to own or rent their own copy of the book, whether printed or electronic. Either the hardcover or the paperback is acceptable.

Each week, some articles and/or videos will be required reading/viewing. These will be linked in Canvas. There is no fee for these materials. Some might require students to log into the library with the UF VPN.

Course Requirements and Grading Policies

Read this entire document (the syllabus) in the first week of classes. If anything is not clear to you, ask me for clarification before the last day of Drop/Add (**Aug. 28, 2024**). This syllabus is a contract between you and me.

Please make sure to check the relevant Canvas module early in the week. Plan your work accordingly so you have enough time to absorb the material. All your deadlines are in Canvas.

Quizzes

There will be 12 weekly quizzes, *plus* a syllabus quiz. Quizzes are in Canvas and are always open-book. Quizzes cover the assigned readings/videos for the week. These are always listed in precise detail **in the module's "Assigned readings" page in Canvas**. Deadlines are in Canvas. Any quiz not submitted by the deadline is graded 0. *Your lowest quiz grade will be dropped*. If a genuine emergency causes you to miss a quiz, see "Course Deadlines and Makeup Work," page 2, above, for the policy on makeup quizzes.

Exams

There will be one midterm exam and a final exam. These will require essay (long-form) answers to demonstrate your understanding of the ideas in the course. **The final exam will be in Finals Week, on Dec. 12, 2024.** Each exam is 20 percent of your final course grade.

Research paper/unpaper

You have a choice: Write a traditional research **paper**, or produce a **project** in another medium (video, infographic, etc.) that requires an equivalent amount of research. Details are provided in Canvas. This is 20 percent of your final course grade.

Attendance and participation

Points are accumulated weekly as detailed below. This is 20 percent of your final course grade. **Participation in Zoom is expected**; you will be working on assigned activities and small-group discussions during class. Absences due to illness, serious family emergencies, special curricular requirements, etc., will be handled **in accordance with UF policies**, to which you will find a link on **page 2** of this syllabus.

- The **lectures** will be *asynchronous*, prerecorded video. Thus no attendance points are attached to the lectures. However, it is expected that the lecture will be viewed and all assigned readings/videos read or watched **BEFORE the Wednesday class meeting each week**.
- **The Wednesday class meeting** each week is where the attendance and participation points come from. This is a *synchronous two-period* meeting, which will be fully in Zoom. If you are not there, you get 0 points. (You did not *participate*.)
- Your camera must be on. You should be sitting upright (not lounging/lying down). Your appearance should be similar to what it would be in the classroom — that is, your clothes and hair should be appropriate to be seen by your classmates and your instructor. You should be paying attention, not talking to people off-camera. In other words: ***Be present***.

- It is expected you will attend the entire two periods every week. Attendance for the full time is 1 point. Partial attendance is 0, unless class is dismissed early.
- You will show up in Zoom on time. For chronic lateness—
 - If you have been marked late 4 times or more: –1 point from the total
 - If you have been marked late 8 times or more: –2 points from the total
- Each week, students will be divided into teams. You will be on a different team each week. Activities and discussion questions will be assigned, and teams will collaborate on these in breakout rooms. Throughout the double period, the full class will come together and then go back into breakout rooms for other work. That is, you will not be in the breakout rooms continuously for the two periods.
- The group's work will be documented in *one* shared file *such as* Jamboard, [Miro](#) or a Google document, which will be submitted in Canvas for grading immediately at the end of the double period. Instructions will be given each week. If using Google Docs, you are reminded to use the UF Apps version and not the general/public Google Docs version.
- Each team will be assigned a **team leader**. The team leader is responsible for submitting the shared file. Every student in the class will be a team leader at least once. The team leader is also responsible for encouraging all team members to contribute equally.
- The shared file, which represents your team's work for one day, is worth up to 3 points. It might earn anywhere from 0 to 3 points. **Quality** is valued over quantity. A rubric is available in Canvas.
- Finally, *each team member* will submit a **team checklist** at the end of the double period. This is a form, and it is worth 1 point if filled in correctly and completely. In the form, you will list your name and the names of all your team members. You will **rate the contributions of your team leader and all team members**, including yourself. This is an attempt to hold every team member accountable so that everyone participates and division of labor is fair.
- To summarize, the attendance and participation points for one week are as follows:
 - 1 point for attending the full two periods.
 - Up to 3 points for a *team* document that represents the work assigned that day.
 - 1 point for your *individual* team checklist form, if complete & submitted on time.
 - That is a total of 5 possible points for each student, each week.
- If you miss class, you forfeit all 5 points for that day. Subject to **UF Attendance Policies** (see [link](#) on page 2; this covers *excused absences*). See also "Note About Excused Absences" on the last page of this syllabus.
- Your lowest-score day will be dropped, allowing you one absence without penalty.
- In the midterm week, there are no points for attendance and participation.

Grades

Quizzes	20 percent
Midterm exam	20 percent
Final exam	20 percent
Research paper/unpaper	20 percent
Attendance and participation	20 percent
TOTAL	100 percent

UF Policies about Student Grades

> <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

92–100 points	A	72–77 points	C
90–91 points	A–	70–71 points	C–
88–89 points	B+	68–69 points	D+
82–87 points	B	62–67 points	D
80–81 points	B–	60–61 points	D–
78–79 points	C+	59 points or fewer	E

Standard rounding: 80.5 becomes 81, and 80.499999 becomes 80.

UF Dates (Fall 2024)

Classes begin	Aug. 22	Labor Day	Sept. 2 (UF holiday)
Drop/Add	Aug. 22–28	Veterans Day	Nov. 11 (UF holiday)
Classes end	Dec. 4	Thanksgiving Break	Nov. 25–30
Final Exams	Dec. 7–13		

Students with Disabilities

Students requesting accommodations must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student, who must then *provide this documentation to the instructor* when requesting accommodations. Accommodations must be discussed in private, not in the classroom.

UF Disability Resource Center

> <https://disability.ufl.edu>

Course Evaluations

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. Students will be notified when the evaluation period opens and can complete evaluations in their Canvas course menu under GatorEvals, or at: <https://ufl.bluer.com/ufl/>

Summary results of these assessments are available to students:
<https://gatorevals.ua.ufl.edu/public-results/>

Course Schedule and Required Work

Please note that many important details are in Canvas and do not appear herein. Additional assigned readings, links to videos, resources, etc., are **in Canvas**.

Week 1 | Aug. 26–30

Introduction to the course. Complete the syllabus quiz. **INSTRUCTIONS ARE IN CANVAS:**

Module 1. GET THE BOOK. Get started on Week 2 reading and videos.

Week 2 | Sept. 2–6

Monday is Labor Day

Foundations: The Singularity and General AI. Symbolic AI. Perceptrons and conditioning. The MNIST dataset.

READ Mitchell, Prologue and chapter 1. Other readings/videos as listed in Canvas.

Quiz 1.

Week 3 | Sept. 9–13

Foundations, part 2: Deep learning: layers and weights. Back-propagation. Narrow or “weak” AI. What is *intelligence*? Cycles of AI Winter and Spring.

READ Mitchell, chapters 2 and 3. Other readings/videos as listed in Canvas.

Quiz 2.

Week 4 | Sept. 16–20

Machine vision and object recognition. Convolutional neural networks. Training and classification.

READ Mitchell, chapter 4. Other readings/videos as listed in Canvas.

Quiz 3.

Week 5 | Sept. 23–27

Machine vision and object recognition, part 2. ImageNet. Training data and test data. Common mistakes in object recognition.

READ Mitchell, chapter 5. Other readings/videos as listed in Canvas.

Quiz 4.

Week 6 | Sept. 30–Oct. 4

What is *learning*? Big Data and AI. The human components in machine learning. Unsupervised learning (vs. supervised). Adversarial attacks — how to fool an AI.

READ Mitchell, chapter 6. Other readings/videos as listed in Canvas.

Quiz 5.

Week 7 | Oct. 7–11

Face recognition and racial and gender bias. Self-driving cars and the long tail. How can AI be regulated?

READ Mitchell, chapter 7. Other readings/videos as listed in Canvas.

Quiz 6.

Week 8 | Oct. 14–18

Midterm review. *This is an OPTIONAL synchronous Zoom meeting on Monday, Oct. 14.*

Midterm exam during the Wednesday class double period, **Oct. 16**. In Canvas. No Zoom.

Week 9 | Oct. 21–25

Robots. Reinforcement learning and Q-learning. How is this different from neural networks?

READ Mitchell, chapter 8. Other readings/videos as listed in Canvas.

Quiz 7.

Week 10 | Oct. 28–Nov. 1

AI and games. More on reinforcement learning (vs. supervised). Rule-based systems (brute force) and their limitations. Arcade games. Chess. AlphaGo and DeepMind. Monte Carlo tree search.

What is implied by the recent successes of reinforcement learning? Comparison of game states and parameters to real-world scenarios. How far off is general AI (AGI)?

READ Mitchell, chapters 9 and 10. Other readings/videos as listed in Canvas.

Quiz 8.

Research paper/unpaper proposal due Oct. 28. *See assignment details in Canvas.*

Week 11 | Nov. 4–8

Natural language processing. What is *understanding*? Speech recognition. Word vectors. Sequential data and time steps (recurrent neural networks).

READ Mitchell, chapter 11. Other readings/videos as listed in Canvas.

Quiz 9.

Week 12 | Nov. 11–15

Monday is Veterans Day

Machine translation. Encoding/decoding. How quality of translation is measured. Differences in quality between translated short texts and long(er) texts. Generative AI.

READ Mitchell, chapter 12. Other readings/videos as listed in Canvas.

Quiz 10.

Week 13 | Nov. 18–22

Question-answering systems. IBM Watson and the *Jeopardy!* Challenge; IBM Watson tech in other domains; failures. Voice assistants (Siri, Alexa, etc.). SQuAD and Winograd schema.

READ Mitchell, chapter 13. Other readings/videos as listed in Canvas.

Quiz 11.

Research paper/unpaper due Nov. 22. See assignment details in Canvas.

Week 14 | Nov. 25–29

Thanksgiving Break. No classes, no assignments.

Week 15 | Dec. 2–4

The 4th, Wednesday, is the last day of classes. Class meets in Zoom as usual.

Summing up! Abstraction, analogy, meaning, and metaphor: What AI (still) can't do. Questions that remain.

READ Mitchell, chapters 14, 15 and 16. Videos as listed in Canvas.

Quiz 12.

Final Exam | Dec. 12

UF scheduled final exam time is **Thursday, Dec. 12**, starting at **3 p.m.** The exam period is two hours. PUT IT ON YOUR CALENDAR.

- Note that this **exam time** is not a normal class meeting day and not the normal class meeting time.
- This date and time are set by the university. The final exam is *online*, like the midterm.

Weekly topics are subject to change. Please check in Canvas for the latest updates.

A Note about Office Hours

The link below provides a grid that shows my schedule. All white cells in the grid are open for appointments. Please give me 24 hours to respond to your request, and please send your request in email. Tuesday 1–3 p.m. is *drop-in time* (on campus) — no appointment is needed!

<https://docs.google.com/spreadsheets/d/1coH020Bvzs0-GXV2dQP1B7zUUE2ma0DBRC0iXr24FRY/edit?usp=sharing>

How to Communicate with Me, Your Instructor

For *private communications*, regarding your grades, accommodations for disability, etc., please use email, meet with me in person, or schedule a meeting in Zoom.

- Email directly in our Canvas course is great.
- Email me outside Canvas at mmcadams@ufl.edu — also fine.

Make sure to read all **Announcements** posted in **Canvas**. I will use the Announcements to remind you about deadlines or any changes in class meetings, assignments, etc.

Your Privacy and Class Recordings

Any student-made recording of any class meeting must comply with Florida state law:

<https://www.flsenate.gov/Session/Bill/2021/233/?Tab=BillText>

As in all UF courses, **unauthorized sharing**, publication or uploading to any online platform of recorded materials (or any class materials) is **prohibited**.

Only an in-class lecture may be recorded. **The law states:** “A class lecture **does not include** lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.”

The privacy of all students in the class must be respected by the instructors, teaching assistants and all other students or visitors to the class.

Additional information from UF:

<http://aa.ufl.edu/policies/in-class-recording/>

Note About Excused Absences

What counts as an “excused absence” is explained in the official **UF Attendance Policies**. There is a [LINK](#) to those on page 2 of this syllabus. Your absence is NOT excused unless you provide me, your instructor, with documentation that qualifies it as “excused” under the UF policies. You must send me the documentation as *an email attachment* (use my UFL email for this) and explain *in your email* which dates of this class were affected. I need the email as a record.

I will file that email from you and refer to it at the end of the semester.

You will still have a zero *in the Canvas gradebook* for the day’s participation and attendance if your absence is excused. Generally those zeros will not affect your final grade for this course. However — yes, it is *possible* that they *could* lower your grade. Here is how I account for that: At the end of the semester, I check all the emails saved in my “Students/excused absences” folder, and I note which students had properly excused absences. Then I check the gradebook to see if any of those students missed *more than one* class meeting. If so, for each student, I calculate the difference for any “excused” day as if you were not absent. If getting the 5 points on that day (or days) would increase your course grade, then I will give you the higher grade. This applies only to specifically sanctioned **excused** absences.

There are 60 attendance/participation points. Your lowest day is dropped, so 60 becomes 55 (maximum possible). Attendance/participation is 20 percent of the course grade (20 percentage points out of a total 100). *One* unexcused absence would decrease that 20 points by 1.818. If you’re on the borderline, then the restored points *might* change your grade. Example:

- Course grade with one unexcused and one excused absence (two zeros) — 70 out of 100
- Restored percentage points for one excused absence — 1.818
- 70 becomes 71.8
- 71.8 points rounded up to 72 — the C– becomes a C

Please note that there are no points and no makeups for any unexcused absence. The points are awarded for your participation during class.

(end)