

# The Essentials of AI for Life and Society: An AI Literacy Course for the University Community

Joydeep Biswas, Don Fussell, Peter Stone, Kristin Patterson,  
Kristen Procko, Lea Sabatini, Zifan Xu

The University of Texas at Austin

# Context: Why did we do this?

*"Did ChatGPT pass the Turing Test?"*

*"What can ChatGPT do?"*

*"Have LLMs solved AI?"*

**ca. December, 2022**

*"Have you seen this thing called  
ChatGPT?"*

*"Is AI/ChatGPT going to take over my job?"*

*"What is this thing called 'AI'?"*

# The Problem: Dearth of The Right Resources

What existed:

- Technical papers / research papers: Not accessible to broad audience
- News articles: Focussed on recent events and techniques
- Blog posts / technical articles: Narrow focus
- AI courses in universities: Required CS/similar prerequisites

What was missing:

*An in-depth, but broadly accessible resource on AI, covering the full breadth of AI techniques, and simultaneously discussing the socio-technical factors of AI.*

# Curricular Objectives - AI Literacy

- What is AI?
  - => Must include a broad overview of the wide range of techniques that comprise AI, not just the most recent ones
  - => Include correcting any common misconceptions of what AI is, and isn't
  - => Include enrichment materials for further reading
- What are the societal implications of AI?
- What are some of the major application areas of AI?
- What are open challenges and opportunities for AI?

CS 109-WB

FALL 2023 | WEDNESDAYS, 4-5 PM ONLINE  
OPEN TO ALL UNIVERSITY COMMUNITY MEMBERS

# The Essentials of AI for Life and Society

Instructors: **Joydeep Biswas**, **Don Fussell**, & **Peter Stone**

*Lectures will be given by instructors as well as several guest lecturers.*

What is AI, and why should you care?

Artificial Intelligence technologies are affecting our lives, changing the way we do nearly everything – from how we work and learn to how we interact with our friends and move about our cities– because they are increasingly everywhere and increasingly powerful.

The Essentials of AI for Life and Society will cover fundamental concepts for AI literacy, as well as the ethical and societal implications of AI technologies. You will learn general AI literacy, including:

- The types of AI and their applications
- The risks and benefits of various AI technologies
- The societal impacts of AI technologies
- How to tell AI science from science fiction

Only your curiosity and willingness to explore are needed for this class. No prior technical knowledge is necessary.

**STUDENT ENROLLMENT: OFFICE OF THE REGISTRAR ONLINE  
FACULTY AND STAFF REGISTRATION (AUDIT WITHOUT CREDIT):**

<http://bit.ly/essentials-ai-course-registration-form>



The University of Texas at Austin  
Department of Computer Science  
College of Natural Sciences

# Course Description

## WHAT WILL I LEARN IN ESSENTIALS OF AI THIS SEMESTER?

What is AI, and why should you care?

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# Defining Artificial Intelligence

- A science and a set of computational technologies that are inspired by, but typically operate quite differently from, the ways people use their nervous systems and bodies to sense, learn, reason, and take action
- NOT one thing
  - More than just deep learning
  - RL, NLP, vision, planning, symbolic reasoning, algorithmic game theory, computational social choice, human computation
- Getting Computers to do the things they can't do yet
  - Once it works, it's engineering

# Course Structure

## Weekly Activities:

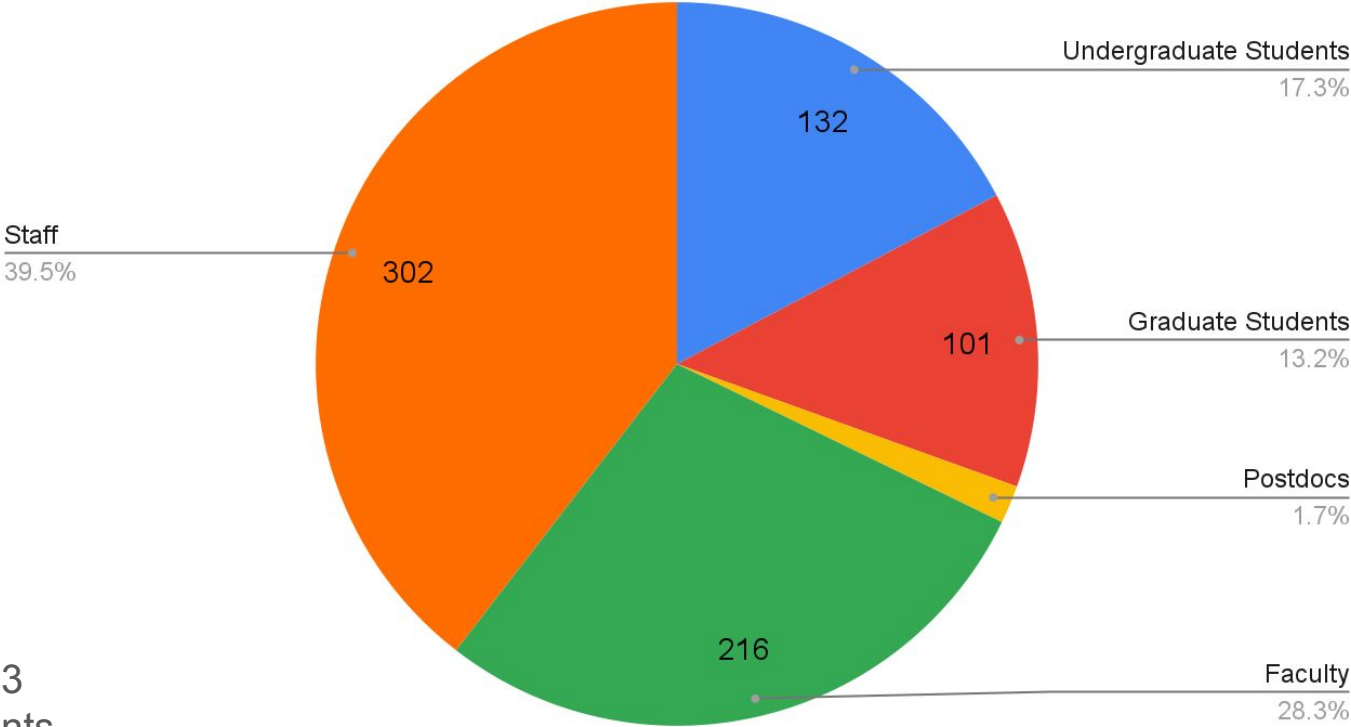
- Read the provided material before the weekly lecture on the topic of the week
- Attend a live-streamed lecture on the topic for the week: ~30-40 minutes of presentation, followed by ~10-20 minutes of Q&A
- Answer the (simple) in-lecture questions
- Participate in Q&A with the speaker after the presentation section of the lecture
- Write a reflection on the topic



# Course Lecture Schedule

<b>Topic</b>	<b>Lecturer (Department)</b>
Introduction - AI100 study(Littman et al. 2022)	Peter Stone (Computer Science)
Planning and Search	Joydeep Biswas (Computer Science)
Probabilistic Modeling	Roberto Martín-Martín (Computer Science)
Machine Learning Fundamentals	Adam Klivans (Computer Science)
Machine Learning Paradigms	Ray Mooney (Computer Science)
Computer Vision	Kristen Grauman (Computer Science)
Intelligent Robotics	Luis Sentis (Aerospace Engineering /Engineering Mechanics)
Natural Language Processing (Large Language Models)	Greg Durrett (Computer Science)
Philosophical Foundations and Relation to Computing	Don Fussell (Computer Science)
AI and Mis/disinformation	Matt Lease (School of Information)
Bias and Fairness in AI Models / Elargetical Datasets	S. Craig Watkins (Journalism and Media)
Impacts on Workplace and Economics	Sherri Greenberg (LBJ School of Public Affairs)
AI Alignment and Existential Threats	Scott Aaronson (Computer Science)
Current and Future Directions	Joydeep Biswas, Don Fussell, Peter Stone (Computer Science)

# Enrollment Demographics

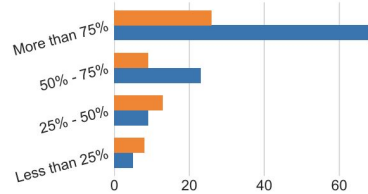


Total: 763  
participants

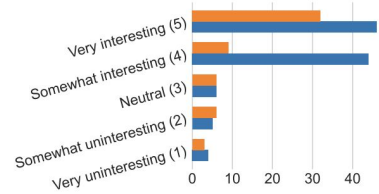
# Enrollment Demographics

<b>UNIT</b>	<b>UG</b>	<b>GS</b>	<b>P</b>	<b>F</b>	<b>S</b>	<b>T</b>
Engineering	3	22	3	9	6	40
Education	1	3	0	28	33	64
Fine Arts	2	1	0	10	7	18
Liberal Arts	36	12	1	43	11	67
Natural Sciences	80	24	3	67	51	145
Pharmacy	0	1	1	1	0	3
Medical School	0	2	1	2	25	30
Geosciences	0	0	0	0	1	1
Public Affairs	0	0	0	2	0	2
Business	9	1	0	10	13	24
Communication	1	4	1	16	2	23
Architecture	0	1	0	9	6	16
Information	0	22	3	0	1	26
Law	0	1	0	4	1	6
Nursing	0	2	0	0	1	3
Social Work	0	0	0	3	7	10
UG College	0	0	0	0	8	8
Other	0	5	0	12	129	146
<b>Total of Type</b>	132	101	13	216	302	763

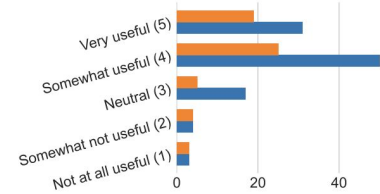
# Survey Responses



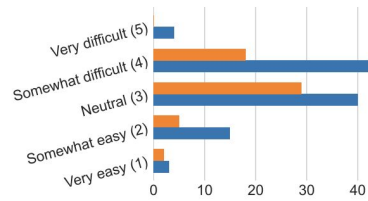
(a) How much of the course did you engage in?



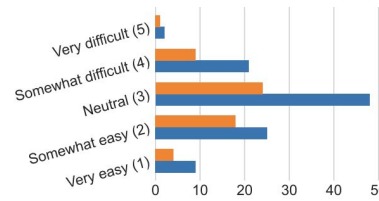
(b) Please rate this course on how interesting it was:



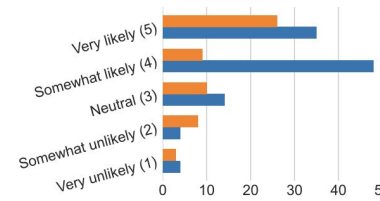
(c) Please rate this course on how useful it was to you:



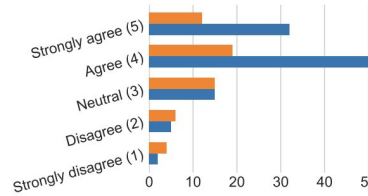
(d) How easy/difficult did you find the readings overall?



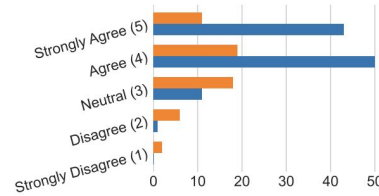
(e) How easy/difficult did you find the lecture material overall?



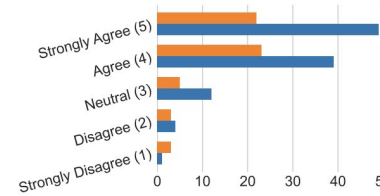
(f) How likely or unlikely are you to recommend this course to another person?



(g) This course cleared up a misconception I had about AI.



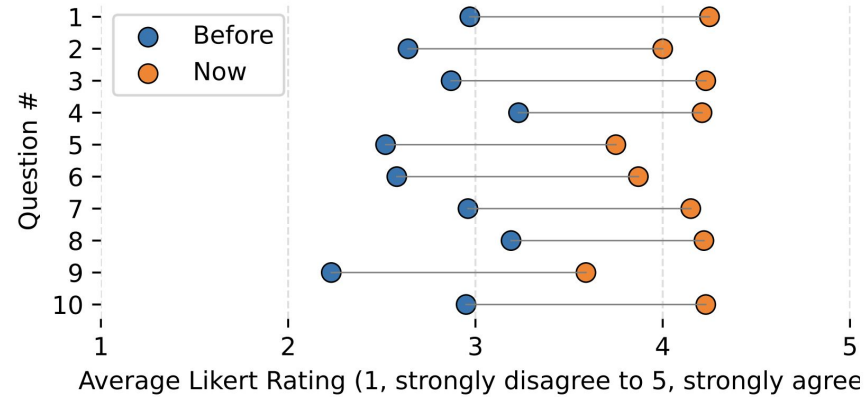
(h) This course helped me understand how AI may impact me in my specific field.



(i) I learned more from this course than I could have on my own if I had actively sought out the material.

# Retrospective Analysis

1. I can define artificial intelligence (AI). (+1.27)
2. I have the necessary vocabulary to discuss AI. (+1.36)
3. I can list five examples of AI. (+1.37)
4. I can describe how AI affects my daily life. (+0.97)
5. My understanding of AI makes me well-equipped to apply it to my future professional work. (+1.24)
6. I am prepared to weigh in on the deployment of AI in products that affect me. (+1.29)
7. I can evaluate news stories about AI. (+1.19)
8. I can differentiate AI science from science fiction. (+1.03)
9. I am literate about the technical components of AI. (+1.36)
10. I am literate about the societal implications of AI. (+1.28)



# Lessons Learned From Initial Offering

- Engaging the full broad range of participants is challenging for an AI literacy course.  
[participants included undergrads, grad students, post docs, faculty, staff]
- Course participants appreciated the variety of speakers and connection to examples—the more the better!
- The readings were the most challenging part of the course for our non-technical audience.

# Follow-Up Course

- Offered Fall of 2024
- Full 3-credit-hour course
- Open to all undergraduate students
- Full materials online

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