

EPOL 490: Machine Learning and Human Learning

Spring B 2024



INSTRUCTORS AND TEACHING ASSISTANTS

Instructor: Dr. Bill Cope; billcope@illinois.edu

Teaching Assistants:

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COURSE SCHEDULE AND OFFICE HOURS

Synchronous Session: Mondays 6:30-7:30 pm US Central time.

Zoom link: <https://illinois.zoom.us/j/85392306300>

Meeting ID: 853 9230 6300 Passcode: 535

Find your local number: <https://illinois.zoom.us/u/kj3FuRX4s>

Office Hours: 5:30-6:30 pm US Central time (same Zoom link as above)

COURSE DESCRIPTION

This course examines the differences between machine and human learning and the ways in which machines can complement human learning. It examines technical definitions of supervised and unsupervised machine learning, as well as broader views of mechanical intelligence able to replicate or exceed human intelligence. The course will also explore practical applications of learning analytics and artificial intelligence in learning management systems and other educational tools and critically interrogate the applications of AI in education.

SYLLABUS AND COURSE MATERIAL

All course materials, including instructor videos and assignment details can be found within the *CGScholar platform*, both through the course learning module and the term-specific community. The interactive syllabus can be found on the LDL program website: <https://ldlprogram.web.illinois.edu>. PDF versions of the website are included on the following pages.

[Course Community link](#) (View course content as individual posts and submit work)

[Learning Module link](#) (See all course content on a single page)

[Oral/Video Presentation Sign-up Sheet](#)

[Work Type Sign-Up Sheet](#)

[Update 5: The Canvas of Feedback](#)

[Update 6: Peer Collaboration, Self-Reflection, and AI Review](#)

TERM SCHEDULE AND ADMIN UPDATE TOPICS

Week #	Week Start and Synchronous Session	Week End (and typically due date by 11 p.m. CT)	Course Topic(s)
Pre-Week 1	N/A	March 11th	0. New LDL Course Participant Onboarding, if applicable
Week 1	March 11th	March 17th	1A. In the Beginning: Where Did We Get the Idea That Machines Could Think? 1B: Human Learning and Machine Learning: Can We Make Them Similar?
Week 2	March 18th	March 24th	2A Where are We Heading with Generative AI? 2B: Publications on Generative AI
Midweek 2		March 20th	
Week 3	March 25th	March 31st	3A: How do Humans Learn? 3B: What does “Cyber” Mean, in Science and Fiction?
Week 4	April 1st	April 7th	4A: Cyber-Social Intelligence: What Does the “Turing Test” Test? 4B: What are Our Human Capacities to Mean in Binary Notation? 5A: What are Our Human Capacities to Mean in Binary Notation?
Week 5	April 8th	April 14th	5B: What are Our Human Capacities to Mean in Binary Notation? 6A: What Can We Learn with Educational Data Mining (1)?

Week #	Week Start and Synchronous Session	Week End (and typically due date by 11 p.m. CT)	Course Topic(s)
Midweek 5		April 10th	
Week 6	April 15th	April 21st	6B: What Can We Learn with Educational Data Mining (2)? 7A: Framing the AI Discussion: Knowledge, Human Skill Acquisition, and Cognitive Structures
Week 7	April 22nd	April 28th	7B: Applications of AI to Education 8A: Promising Practices in Mobile Learning – How Could AI Help? 8B: Back to the Future, or New Learning?
Week 8	April 29th	May 8th	All Work Due in order to receive a final grade by the deadline