CS 321
Decision Making in Artificial Intelligence

Dave Musicant
What is Artificial Intelligence (AI)? Come up with a definition.
Topics we’ll cover

- Intelligent search
- Multiplayer game playing strategies
- Automated logical reasoning
- Prolog programming
- Probabilistic decision making
- Reinforcement learning
- ... More as time allows!
Topics we won’t cover (much)

**CS 320: Machine Learning**
- Supervised and unsupervised machine learning
- Neural networks

**CS 322: Natural Language Processing**
- chatbots
- interact with you like a human

**CS 328: Computational Models of Cognition**
- modeling how humans learn and think, with computational ideas
Structure of class

Flipped format:
- videos or readings and quizzes due before class for basics
- lecture and Q&A in class for more in-depth
- worksheets in class to be done in groups

Assignments:
- mix of programming and analysis
- mix of individual and pair

Exams:
- in-class exams
- worksheets from class should be good practice
Artificial Intelligence, A Modern Approach (4th ed):
- Stuart Russell and Peter Norvig (director of research at Google)
- Used by over 1500 schools
- Can digitally rent for the term for $40
Deadlines

Pre-class quiz due by beginning of class.
- Due date appears in Moodle as “expected completion date.”
- Have 7 “quiz” late days that you can use, automatically applied (by grader).
- Might be more than one quiz on a given day, since Moodle ties to individual videos.

Assignments (programming or analysis) have regular deadlines in Moodle.
- Have 7 “assignment” late days that you can use, similar.
- Will mostly be due on class days (M/W/F, at 10pm).

Course grader: Carl Tankersley
Classroom guidelines

Laptop multitasking hinders classroom learning for both users and nearby peers

Faria Sana, Tina Weston, Nicholas J. Cepeda

Laptops are commonplace in university classrooms. In light of cognitive psychology theory on costs associated with multitasking, we examined the effects of in-class laptop use on student learning in a simulated classroom. We found that participants who multitasked on a laptop during a lecture scored lower on a test compared to those who did not multitask, and participants who were in direct view of a multitasking peer scored lower on a test compared to those who were not. The results demonstrate that multitasking on a laptop poses a significant distraction to both users and fellow students and can be detrimental to comprehension of lecture content.
Classroom guidelines

If you will be using a laptop:

- recommendation is to sit in back
- if need to sit elsewhere, then use it to take notes and that’s it
- others in class are empowered and encouraged to ask you to cease multitasking

Regardless, take notes!

- Paper is awesome
- Helps keep you focused
- Helps you remember what you want to ask about
- Helps you assist others who are out
- Look up Cornell Notes
Handling when you can’t be here

- Pre-class materials will be posted to Moodle
- Worksheets will be posted to Moodle
- In-class lecture topics will match sections in textbook, posted to Moodle
- In-class teams can help take notes for each other; make a plan right away
- ... but won’t be recording class.
Slack is primary communication method for course

- Link on Moodle for invite
- Announcements will go to Slack
- Post all q&a related to course... and answer each other!
- Find a notification system that works for you
- If you email me, I’ll nicely ask you to repost it to Slack (unless it’s personal)
- If you feel you must, /anonymous, but please use sparingly.
My communication timing

I’ll check Slack / email 3 times a day on weekdays:

- First thing in the morning (once approx 6-8am)
- Midday (once approx 11:30pm-1:30pm)
- End of working day (once approx 4:30pm-6:30pm)

Weekends are more sporadic
Special announcement for upcoming Monday

- Guest speaker: Collin Stultz of MIT
- Visiting Carleton early next week (virtually)
- Practicing physician who uses AI approaches
- More info to follow