CS 4701:
Practicum in
Artificial Intelligence

Fall 2019
Prof. Haym Hirsh

Overview Lecture

Course Details

- Instructor: Prof. Haym Hirsh, Gates 352

- TAs: TBA

- Course website: http://www.cs.cornell.edu/courses/cs4701/

- There is no regular class meeting time
  - Wednesdays at 10:10am was selected to ensure that there would be a room for organizational meetings
  - Everything in organizational meetings will also be provided online (such as these slides)
  - There will be a makeup time for those with conflicts with Wednesdays 10:10am

You are <u>strongly advised</u> to take 4701 only AFTER
you have taken 4700 or one of our other AI classes

Students who do not do so do not perform as well

You get to have ownership of a project that interests you in AI

You need to be excited by that

This is not a "curated" project that everyone does in sync with a class and with each other

Course Communications

- Course email: FAI-PRACTICUM-L@cornell.edu

- Questions/Discussions: Piazza – For 4701, not 4700

Special Accommodations

Scan documentation letter and email to FAI-PRACTIUM-L@cornell.edu

Grading

- 10%: Various milestones

- 90%: Project
  - Teams of size 3
  - Will use Piazza to find partners
  - Submissions will be a combination of Gradescope, Google Forms, and CMS

- You lose points for not following instructions

- More details in project description online

Milestones

- Monday, September 30, 11:59am: Teammate Selection
- Monday, October 7, 11:59am: Project proposals
  - Grade will generally be one of
    - Minor comments, go ahead with it
    - Comments, submit revision
    - Talk to course staff (can be due to concerns, uncertainty on our end about project)
  - Goal is not evaluation/testing, it's to help you do something great
- Monday, November 4, 11:59am: Status Reports
  - Projects will morph, this is where you document it
- Last week of classes: Short presentations
- Monday, December 16, 8:00am: Final Reports

Projects

- Should:
  - Be primarily about AI
  - Involve significant systems building
- Should not:
  - Be primarily about running data through machine learning algorithms
  - Hand-coding a bunch of rules for a video game to create what in that world would be called an "AI"

Projects

- Use whatever programming language you think is best
  - Your code will not be graded. This is a 4000 level course, we assume you can code.
- Can use external resources, such as libraries, data resources, etc.
  - Must be documented
  - Goal is to use them to have even grander ambitions by building off of them, *not* that you built something gluing some existing packages together and most of the heft came from those packages
- Can be connected to other work
  - Must be distinct from it
  - All parties (both 4701 and the other work) must be informed and agree to it
  - Must be documented in proposal
  - Goal is to leverage it to have even grander ambitions

Project Grading

- 50%:   Effort
(= Don't leave this till the last two weeks of the semester)
- 20%:   Clarity of writing
This is not software documentation, it's about a project
- 30%:   Evaluation, such as

of conjectures/claims
of system performance

Human evaluation is great (such as a game playing program)

(The developers are not "fair" human subjects)

Put this in your schedule!

Be ambitious

Glorious failure is better than mild timid success

You don't get a good grade by
asking an easy question and answering it successfully

You get a good grade by:

trying something cool,
putting a lot of work into it,
being clear about what constitutes success or failure, and
documenting the extent to which you succeeded or failed

Something to think about:

Did you come up with a project that if successful would be cool to put up on a website for prospective employers to see?

4701 is at its best when you're doing something that excites you

Find it

Finding Partners

- We will enable Piazza's partner-finding functionality

Finding Partners

- We will enable Piazza's partner-finding functionality

- Meet outside Gates G01 at 4:50pm
  (after makeup session for this lecture)

Finding Partners

- We will enable Piazza's partner-finding functionality

- Meet outside Gates G01 at 4:50pm
  (after makeup session for this lecture)

- Now

Mingle

- Take a moment to think about:
  - At least two areas you're interested in
                Don't start with a single stubborn idea
  - What gaps you might have that complementary strengths would help with

Mingle

- Take a moment to think about:
  - At least two areas you're interested in
    Don't start with a single stubborn idea
  - What gaps you might have that complementary strengths would help with

- Talk to two people you don't already know
  - Look for people who are looking around for someone to talk to