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 strongly advised 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

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• Meet outside Gates G01 at 4:50pm (after makeup session for this lecture)
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• 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
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• Talk to two people you don’t already know
  • Look for people who are looking around for someone to talk to