CS-4701 Practicum in Artificial Intelligence --- Fall 2021

Project Proposals

Due Date: Friday, October 29, 6pm

Email pdf to *selman@cs.cornell.edu*

Use as Subject:
> **CS-4701 proposal – netids**
> Also, cc your partners.

Format: The proposal write-up should contain six components:

> **1. Title** of your project *[give descriptive title, reflecting your topic; without title your proposal is incomplete; do not use title "My CS-4701 project"]*.

> **2. Names** with **Cornell netids** of team members. **Team size: maximum 3.**

> **3.** A clear and concise **description** of what you plan to do. (3 or 4 paragraphs)

> **4.** The general **approach** you'll use (e.g., heuristic search, game tree search, (deep) learning, inference rules, or neural networks).

> **5.** An explicit, coherent **plan** for a quantitative and/or qualitative evaluation of your approach and system.

> **6.** A **timeline** for your implementation and evaluation + team member tasks.

The proposal should not be more than about **two pages** in length. Proposals can be modified for content in response to my comments/suggestions.

NOTES:

1. Email me at **selman@cs.cornell.edu** if you'd like some feedback on early ideas or are looking for a partner. **Use as Subject: CS-4701 + key words on issue**
   Note that without CS-4701 in the Subject line your email will likely be missed!
2. For projects ideas, see the CS-4701 webpage. Check R&N for chapters related to your project.
3. For the **final evaluation,** I will have a zoom meeting with each group. You will need to present your project with a **powerpoint (about 10 to 15 slides)** and a brief **demo of your software**. So, it is important to include a good graphical interface for the demo **(*if* your project has a visual component).** You will also need to hand in a **written report** on the project (**between 10 and 20 pages; 1 ½ spaced; 11pt; include references (5 minimum)**) and record a brief **2 minute video** giving a synopsis of your project. The write-up should include a clear description of the overall goals of the project, the software written, and *the results of a careful evaluation of your system with various observations on the AI components and their performance*. For the latter aspect, you should think about ways to study your system. For example, in a project on game playing, you should have your program play itself or variations of itself (add some randomness to move selection to avoid playing the same games over and over). You can evaluate how well various heuristics perform and the effect of increasing search depth. In a learning related project, you can consider the effect of training data size and the complexity of the learned concept or neural net. *Don't hesitate to drop me an email if you have questions about these issues or want to run project ideas by me.*