**CS2400 Final Project: Topics in AI Spring 2020**

Overview: For this lab teams will be researching, implementing, and presenting on an AI algorithm that we haven’t had in a lab yet this term.

Learning Outcomes:

* Ability to research an unfamiliar AI algorithm
* Presentation of technical content
* Finding, tuning, and explaining code from the internet

Instructions:

In pairs, you will select a topic from the list below to research and present to the class. Each topic may only be selected by one pair. You should focus only on how the technology, algorithm, or topic relates to AI.

You will be putting together a 8-10 minute presentation. The presentation must include:

* An overview of the technique including who invented it
* A clear description of what its applications within AI
  + This should include a description of a modern problem that uses the tool/technique
* A discussion of the strengths and weaknesses of the technique in relation to other algorithms
* A demonstration of code that you found and MODIFIED to show how the technique works
  + This should include a description of how you modified the code and why
* Potential applications for this technology in the future
* Any ethical concerns that stem from the use of the technology

Citations are expected in both your presentation and code. Lack of citations will disqualify slides or code from inclusion in your grade.

Topics:

* Logical Agent
* Prolog
* Negamax
* Expert Systems
* Lisp
* Bayesian Learning
* Dynamic Belief Network
* Constraint Satisfaction Problems
* Partial Order Planning
* Hidden Markov Models

Code:

You are expected to find a non-trivial code example of an application of your technology and get it working to demo it for the class. You are expected to modify the code in a meaningful way to demonstrate understanding of it. Citations of where the code came from is also expected.

Grades:

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| Presentation clarity, professionalism | 20% |
| Content rigor | 40% |
| Implementation | 20% |
| Effort equity | 10% |
| Presentation Engagement | 10% |

Due date:

Presentations will happen during week 10. You should be ready on the first date the instructor identifies for presentations.

Submission Instructions:

1. Submit your presentation (powerpoint or PDF)
2. Submit your code
3. Submit a statement from each team member including their contributions toward the project.