

# **CS 4480, Fall 2010**

## **Term Project**

### **Description of Final Write-up**

#### **Overview**

I expect several typed pages of explanation of how your system works. You should describe the key data structures, algorithms, and the limitations of your system. It would be instructive to include an example with some annotation explaining any particular strengths or weaknesses. Your example should give the reader a feel for how your system works.

#### **Final Project and Write-up Submission**

No later than **11:15 am on Monday, December 13<sup>th</sup>**, turn in all of the following:

- The final version of your write-up, in both printed and electronic form (use submission system).
- The final version of your code in electronic form (use submission system). This should include instructions on how to run your code and any limitations of machine architecture it will run on.

#### **Example for Othello**

Suppose that your system is a program that plays the game Othello. The following is intended to give you an idea of what is expected; it is not intended as a required template.

##### **Title, Author, Course, Date**

MyOthello: a Game

Iago

CS 4480

December 13, 2010

##### **Introduction**

This should be at least a paragraph or two: describing at a high level the problem you are trying to solve, why it is interesting or important, and what follows in your paper.

##### **The Rules of the Game**

Might include: the size of the board, the number of players, a description of the pieces, and the legal moves.

##### **Representation Choices**

Given the description in the rules section, explain how you represented the problem, the choices you made and provide some justification of your choices. A table, showing the top-level function, constants, data types, major functions, and auxiliary functions, would be useful here.

**Evaluating Positions**

Explains how board positions are evaluated. This section may include appropriate algorithms.

**Searching Ahead: Minimax**

Describes a major algorithm, and how and why it is used in the program.

**Searching Smarter: Alpha-Beta Pruning**

Describes a major algorithm, and how and why it is used in the program.

**Analysis of Some Games**

This section will include one or more illustrative examples and analysis of the examples. You should choose examples that make it easy for the reader to understand how the game is played and how your program works. This is a good place to explain some of the strengths and weaknesses of your program.

**Discussion**

This section should be a broader discussion of your system. You can refer to the examples above as illustrations.

**Conclusion**

This will summarize what you have done. Ideas for improvements or future work could be included here.