AI for Games – ITCS 4236/5236

Game Project Requirements

Instructions  
Over the course of the semester, you are to create a complete game where one of the major mechanics employs the use of complex AI functionality or algorithm(s). Examples of what classify as complex AI include but are not limited to: A\* pathfinding, multi-level or complex decision trees, influence mapping, advanced coordinated movement, agent cooperation, and complex dynamic difficulty adjustment.

You will have three (3) deliverables for this project which will each contribute to your final project score. For each of the deliverables, you will present your work, and there are separate rubrics below for the requirements for each of the deliverables. Check the syllabus for their due dates.

Deliverable #1 – Game Proposal

For your game proposal, you will prepare a one (1) page document that outlines your game. The outline must include a description of the game, mechanics, the complex AI component, and any additional, essential information. You will also prepare a five (5) minute presentation on the contents of your outline. Bring a printed, hard-copy of your outline to class to hand in when you present. Please see the rubric below for complete grading guidelines.

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| --- | --- |
| **Category** | **Value** |
| A completed proposal outline that contains game description, mechanics, and AI component(s) | **\_\_\_\_\_ / 50** |
| A hard-copy of the proposal is provided at the time of the presentation | **\_\_\_\_\_ / 10** |
| Presentation explains the game, its mechanics, and AI component | **\_\_\_\_\_ / 20** |
| All members of the group take part in the presentation | **\_\_\_\_\_ / 10** |
| Presenters speak clearly and make appropriate eye contact | **\_\_\_\_\_ / 10** |
| **Total Points** | **\_\_\_\_\_ / 100** |

Deliverable #2 – Game Prototype

For your game prototype, you will demonstrate the core mechanics at work in your game. This is not a completed, polished game but simply a demo. Your game prototype should give us a clear idea of how the game plays, its rules, and what the finished version will look like. A game prototype should have some limited gameplay, but will lack overall polish and completeness. It is not necessary to have your AI component implemented at this point, but you should at least provide an explanation of how it will fit in. You will also prepare a 10-15 minute presentation to show us your prototype. Please see the rubric below for complete grading guidelines.

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| --- | --- |
| **Category** | **Value** |
| Prototype demonstrates the game environment | **\_\_\_\_\_ / 10** |
| Prototype demonstrates the core mechanics of the game | **\_\_\_\_\_ / 40** |
| Prototype provides limited gameplay | **\_\_\_\_\_ / 20** |
| Presentation clearly explains the game prototype and the AI components | **\_\_\_\_\_ / 10** |
| All members of the group take part in the presentation | **\_\_\_\_\_ / 10** |
| Presenters speak clearly and make appropriate eye contact | **\_\_\_\_\_ / 10** |
| **Total Points** | **\_\_\_\_\_ / 100** |

Deliverable #3 – Completed Game

For the final deliverable, you need to provide a completed build of your game that features full gameplay including a title screen, instructions, credits, and gameplay that loops back to the title screen or game. You should also prepare a 5-10 minute presentation to show us your finished project. Please see the rubric below for complete grading guidelines.

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| --- | --- |
| **Category** | **Value** |
| Game contains a title screen, instructions, and credits | **\_\_\_\_\_ / 15** |
| Game successfully implements the proposed AI component | **\_\_\_\_\_ / 40** |
| Game includes elements of strategy | **\_\_\_\_\_ / 10** |
| Game play loops back to title screen or gameplay after game over/win | **\_\_\_\_\_ / 10** |
| Presentation demonstrates the game (play in front of us) | **\_\_\_\_\_ / 15** |
| All members of the group take part in the presentation | **\_\_\_\_\_ / 5** |
| Presenters speak clearly and make appropriate eye contact | **\_\_\_\_\_ / 5** |
| **Total Points** | **\_\_\_\_\_ / 100** |