Coursework 3: Social Behaviour in Games

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1 Introduction

All of your courseworks are designed primarily to give you experience in developing intelligent control and/or cognitive systems. This course also gives you experience and feedback in writing about research. However, this year we are attempting to make the second and third coursework lighter-touch. Therefore, the writeup for this submission should be about one page, without figures etc., and does not need to have all the normal sections for an academic paper.

2 Approach

You will learn to build character Game AI for UT2004. The software for this is installed only in EB 0.10, and you are expected to use the computers there. *If you want to use your own computer, you are solely responsible for trying to get that working, you will not get help from any of the teaching staff.* You will be shown in lab and lecture how to build agents in UT2004 using BEHAVIOR ORIENTED DESIGN (BOD), possibly utilising the ADVANCED BOD EDITOR (ABODE).

70% of your coursework will be marked like the other courseworks, based on a report concerning the benefits and/or costs of creating a team for capture the flag, and how you helped them cooperate. The remaining 30% of the mark will be allocated in a competition to be run in the **Thursday 16 April** laboratory, which is mandatory. 20% will be simply for turning up with working code that is somehow substantially different than what is distributed in lab and having your team successfully compete in a round-robin event. 5% will be allocated to anyone who wins at least two matches in the round-robin stage. An additional 5% will be allocated to the overall winner[1] via a direct elimination tournament on **Tuesday, 21 April**. Attending this second lab is not mandatory, but is fun. Technical details are available in a Tech Brief, provided by Zack Lyons.

3 Results

The results of the tournament are not really the results of your coursework, since it is only one tournament so the significance of the outcomes is not clear. Instead, 70% of your mark will derive from (up to) 10 observations on (approximately [2]) one side of paper, Times 12 point font.

An observation should be a point about what worked or what didn't work with respect to your task. They can be about game AI, cognitive systems more generally, cooperation more specifically. They can be informed critiques of the software tools. An observation can be of more than one sentence,

[1] Note that a few students have prior experience of BOD either from dissertations or repeating the course. If one of them wins, the highest-ranking student without previous experience will also receive 5%.

[2] If you go over by a line or two, don't spend a lot of time fiddling with margins. But going substantially over a page will be penalised in proportion to the extra length, e.g. two pages is the same as zero pages.

so you might want to start with a hypothesis, and then describe evidence that lead you to believe it, or an experiment about how you would test it. In general, you will do better if you draw conclusions that might be applicable to more than only your own bot. Don't feel obliged to recount exactly how your bot did in the competition—I will get that information from the tutors. The observations will be marked on a three-point scale:

0 Missing or redundant.

1 Conspicuously inaccurate or not entirely coherent, but not entirely wrong.

2 A good solid observation.

3 An exceptionally insightful point.

Your overall mark will be multiplied by $\frac{7}{3}$ and added to the outcome of the competition as described above. This coursework as a whole is worth 15% of your mark.

4 Discussion and Conclusions

We know that you are finishing your dissertations in the last month of your degree, so we do not expect you to spend much time on either the code or the writeup. Hopefully you will find this coursework fun. But given it is 15% of your mark, it is probably worth about ten hours of your time.