

Assignment #2: Multiagent Teaming

Overview:

Design and code-up a multi-agent team combining two or more AutoTank agents, and give your agent team a name. This assignment will be similar to the first, but your goal is to destroy/damage *only* your adversaries. Prior to the competition, you will submit a report on the design and coding of your AutoTank multiagent team. Then you will give a 5-10 minute presentation discussing the high points of your design and decision-making system you implemented.

Requirements:

1. This assignment is individual work; you are responsible for creating your own agent.
2. You should be familiar with the AutoTank environment from Assignment 1. You will use the same environment, but do not have to use the same agent(s) used in previous work. You may even borrow agents (with permission from the creator) from other students.
3. Then work to create a two tank multiagent communication and decision-making system and implement this system in the Auto-Tank environment. NOTE: The two tanks must operate as *autonomous* agents, there should be no third-party central decision-maker.
4. Start the code and iteratively improve until you are satisfied you have a good team. While doing this, *create a report detailing the communication/control systems implemented and do not break the rules of the architecture you have selected*. Keep track of the alterations that you make in trying different things for your report. NOTE: Make sure your team not only performs well against other teams, but other individual agents.
5. Create a map for the environment. Use your imagination and there are no rules here. So, you can try and make it easy for your bot and hard for others.
6. Turn all deliverables into a “.zip” file and submit.
7. During class we will place everyone’s bots into the AutoTank ring and have them battle for 5 rounds.

Deliverables:

1. All files that make up your AutoTank agent and communication system (i.e. all changes to the provided content).
2. Completed map file
3. Report (1-2 pages IEEE format)
4. Presentation and slides