

Autonomous Agents - Assignment 3 Report

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1 Introduction

Something here...

2 Method

Something here...

2.1 Scoring system

$$score = reward \cdot 0.9^{T-1}$$

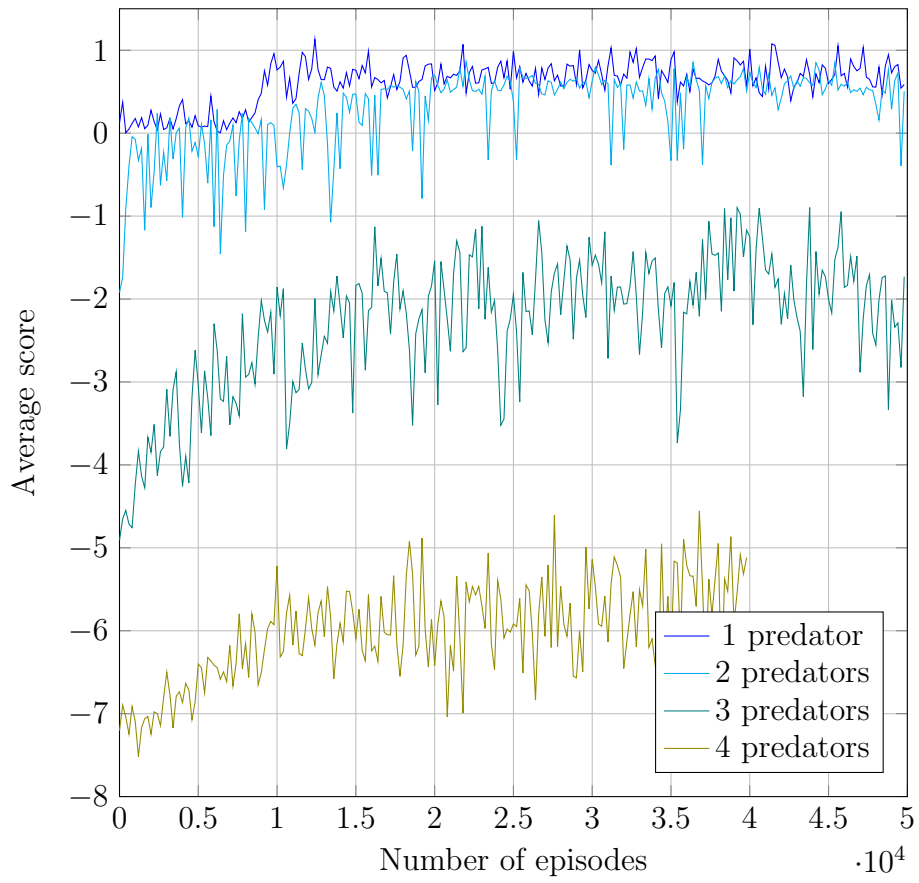
2.2 State-space encoding

In order to make the presented algorithms converge as fast as possible, we made use of the reduced state-space we devised for the first assignment. However, we had to adapt it to the multi-predator scenario in order to make it work with all cases we will be considering for this assignment. To this end, several ideas needed to be introduced.

First of all, we will extend our original idea for a reduced state-space encoding and use the distances from a certain agent to the rest of them, instead of encoding the positions of every agent on the world. This allows us to use two less variables for the state-space encoding. Furthermore, it is now essential to know which agent “we are”, and this needs to be encoded in the state representation somehow. If this information was not encoded, then it would be impossible to distinguish between predators in a multi-predator setting, and the algorithms would not be able to know which predator should be applied a certain action from the usual set {North, South, East, West, Stay}.

3 Results

Something here...



4 Discussion

Something here...

5 Conclusion

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References