ECSE 526
Assignment 3
Reinforcement Learning

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Introduction

1 Description of approach to generalization

Many different distance metrics were used in the program.

2 Results of generalization

3 Description of approach to exploration

First, a simple random approach to exploration was implemented, where a random action is chosen with probability ϵ and the greedy action is chosen otherwise.

Next, weighting with optimistic priors was implemented, using $N(s, a)$, i.e., the number of times action a has been attempted in state s.

4 Results of exploration

The random exploration results can be seen in...
The weighted prior results can be seen in...

5 Agent Performance

Conclusion

6 Acknowledgments

There was a discussion with Andrei Purcarus and Andrew Lowther concerning the positions of various important bytes in the ALE RAM, including the bytes indicating a safe move update and the byte indicating a level change.