Heidelberg University
Institute of Computer Science

Project report for the lecture Fundamentals of Machine Learning

Reinforcement Learning for Bomberman

`https://github.com/nilskre/bomberman_rl`

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Abstract

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Contents

1 Introduction

2 Related Work

[1]

3 Approach

3.1 Reinforcement learning method and regression model

TODO: The frst section shall describe the reinforcement learning method and regression model you finally implemented, including all crucial design choices. You may also describe approaches you tried and abandoned later, including the reasons.

3.2 Training process

TODO: The second section should describe your training process,including all tricks employed to speed it up (e.g. self play strategy, design of auxilliary rewards, prioritization of experience replay and so on).

4 Experimental results

TODO: The third section shall report experimental results (e.g. training progress diagrams), describe interesting observations, and discuss the difficulties you faced and how you overcame them.

5 Conclusion

TODO: The final section shall give an outlook on how you would improve your agent if you had more time, and how we can improve the game setup for next year.

A Appendix

A.1 Appendix A

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References

[1] Joseph Groot Kormelink, Madalina Drugan, and Marco Wiering. "Exploration Methods for Connectionist Q-Learning in Bomberman". In: Jan. 2018. DOI: 10.5220/0006556403550362.