

Multiagent Reinforcement Learning: Rollout and Policy Iteration (Bertsekas, 2020)

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Outline

Introduction

Brief Overview of MARL

Multiagent Rollout

Extensions

Conclusion

Sidenote – Path Integral Control

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Motivation

TODO
TODO.

Outline

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Reinforcement Learning Problem

- Learning how to map situations to actions
- Trial-and-error search
- Delayed feedback
- Trade-off between exploration and exploitation
- Sequential decision making
- Agent's actions affect the subsequent data it receives

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Conclusion

- RL methods can be applicable to a wide variety of problems
- Out-of-the-box models work but require fine-tuning and take longer to converge
- Simple methods like state discretization are worth exploring when training speed and solution complexity are of the essence

References



Reinforcement learning: an introduction, 2nd Edition. Richard S. Sutton, Andrew G. Barto.



Reinforcement learning lectures by David Silver. UCL.
<http://www0.cs.ucl.ac.uk/staff/d.silver/web/Teaching.html>



Playing Atari with Deep Reinforcement Learning. Mnih et al.
<https://arxiv.org/abs/1312.5602>

Thanks for
your attention!