

Theoretical Reinforcement Learning Notes

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Please email me at kriskongloveyou@gmail.com if you find any typos or errors. I do appreciate it!



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Abstract

A kind reminder: This notes are mainly for reinforcement learning (RL) researchers who want to have a deep understanding in some basic RL concepts and related topics from a theoretical perspective. For those novices in this area, I recommend you read Csaba Szepesvári's RL book (about 100 pages)[2] or the most famous RL book (about 500 pages)[1] by Richard S. Sutton and Andrew G. Barto before you read my notes. Of course, you can also take my note as your first RL book and take the two books I mentioned above as references.

Updating...

*To my mum Jing Liang and my dad Zisheng Kuang with my
forever love!*

Acknowledgements

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Chapter 1

Reinforcement Learning Fundamentals

Updating...

Chapter 2

Action-Value Estimation

Chapter 3

Policy Gradient

Appendix A

Appendix Title

Bibliography

- [1] Richard S Sutton and Andrew G Barto. *Reinforcement learning: An introduction*. MIT press, 2018.
- [2] Csaba Szepesvári. “Algorithms for reinforcement learning”. In: *Synthesis lectures on artificial intelligence and machine learning* 4.1 (2010), pp. 1–103.