Notes on Reinforcement Learning and Deep Reinforcement Learning

compiled by D.Gueorguiev, 3/20/25

Introductory Notes

# References

[1] [Deep Reinforcement Learning: Lecture 1: Intro, Episodic Reinforcement Learning and Markov Decision Processes, John Schulman, OpenAI, Berkeley (MLSS Cadiz, 2016)](https://youtu.be/aUrX-rP_ss4?si=cxFW4A2UwqBzVS_S)

[2] [Deep Reinforcement Learning: Lecture 2: More on Cross-Entropy Method and Value Functions, John Schulman, OpenAI, Berkeley (MLSS Cadiz, 2016)](https://youtu.be/oPGVsoBonLM?si=NMt3SSkhK1o22Uww)

[3] [Deep Reinforcement Learning: Lecture 3: More on Episodic Reinforcement Learning and Policy Gradients, John Schulman, OpenAI, Berkeley (MLSS Cadiz, 2016)](https://youtu.be/rO7Dx8pSJQw?si=h5v2bh-Se-CDV93I)

[4] [Deep Reinforcement Learning: Lecture 4: Performance of Policies, Policy Approximations, Parametrized Policies, Asynchronous Methods, John Schulman, OpenAI, Berkeley (MLSS Cadiz, 2016)](https://youtu.be/gb5Q2XL5c8A?si=6fYCJE75Kcs93Ldr)

[5] [Reinforcement Learning Course: Lecture 1: Intro to Reinforcement Learning, David Silver, DeepMind x UCL, 2015](https://youtu.be/2pWv7GOvuf0?si=4EW5Iv50whZLmrqE)

[6] [Reinforcement Learning Course: Lecture 2: Markov Decision Processes, David Silver, DeepMind x UCL, 2015](https://youtu.be/lfHX2hHRMVQ?si=wuSa7hl5sIcNBg7r)

[7] [Reinforcement Learning Course: Lecture 3: Planning by Dynamic Programming, David Silver, DeepMind x UCL, 2015](https://youtu.be/Nd1-UUMVfz4?si=8W0QmfwGtYJhSswb)

[8] [Reinforcement Learning Course: Lecture 4: Model-Free Prediction, David Silver, DeepMind x UCL, 2015](https://youtu.be/PnHCvfgC_ZA?si=pMy18AnRs8K0M6vX)

[9] [Reinforcement Learning Course: Lecture 5: Model-Free Control, David Silver, DeepMind x UCL, 2015](https://youtu.be/0g4j2k_Ggc4?si=wfbcjR3q_ui0exaU)

[10] [Reinforcement Learning Course: Lecture 6: Value-Function Approximation, David Silver, DeepMind x UCL, 2015](https://youtu.be/UoPei5o4fps?si=mhU3k64hfpL4r2kJ)

[11] [Reinforcement Learning Course: Lecture 7: Policy Gradient Methods, David Silver, DeepMind x UCL, 2015](https://youtu.be/KHZVXao4qXs?si=9YTXC1M--8bAdZpH)

[12] [Reinforcement Learning Course: Lecture 8: Integrating Learning and Planning, David Silver, DeepMind x UCL, 2015](https://youtu.be/ItMutbeOHtc?si=CiYa80AdWfH84TeT)

[13] [Reinforcement Learning Course: Lecture 9: Exploration and Exploitation, David Silver, DeepMind x UCL, 2015](https://youtu.be/sGuiWX07sKw?si=FMhQ1UKGpDOaTJLw)

[14] [Reinforcement Learning Course: Lecture 10: Classic Games, David Silver, DeepMind x UCL, 2015](https://youtu.be/kZ_AUmFcZtk?si=cVKj56KPGNrPabX6)

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