

Giochi Combinatori e Machine Learning

Giochi Combinatori e Reinforcement Learning

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Reinforcement Learning

Giochi e Reinforcement Learning

= GioReL su FAD

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Moltissime buone notizie!

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- Cellulare: +39 349 5323 199.
- Telegram (meglio) o WhatsApp (peggio).
- FacciaLibro/Messaggero.
- No Twitter, per Instagram mi sto attrezzando.
- Twitch: forse anno prossimo.
- Registrazione lezioni su FAD, se tutto va bene.
- Registratevi sul FAD e iscrivetevi al corso!
- Ricevo il martedì nell'intervallo $[11:00+\epsilon, 13:00]$, o in qualunque altro momento se posso.

Both the organization and the content of the slides are extracted from the following sources:

- [Reinforcement Learning: An Introduction](#). Richard S. Sutton and Andrew G. Barto, second edition, 2018.
- [UCL Course on RL, videos and slides](#). David Silver, 2015.
- [Tutorial: Introduction to Reinforcement Learning with Function Approximation](#). Richard S. Sutton, 2016.
- [Implementation of Reinforcement Learning algorithms](#). Denny Britz, GitHub project, 2016 (updated in 2018).

- 1 Introduction.
- 2 Dynamic Programming (DP): planning.
 - 1 Markov Decision Processes (MDP).
 - 2 Prediction, improvement, control: policy iteration.
 - 3 Value iteration.
- 3 Reinforcement Learning (RL): learning in the tabular case.
 - 1 Model-free prediction: Monte Carlo (MC) methods.
 - 2 Model-free prediction: Temporal Difference (TD) methods.
 - 3 Model-free control: MC methods.
 - 4 Model-free control: TD methods.
 - 5 On-policy vs off-policy methods: SARSA vs Q-learning.
- 4 Multi-armed bandit. Very likely.
- 5 MCTS. Likely.
- 6 Reinforcement Learning (RL): learning in the function approximation case. Maybe.