Materialien zur Vorlesung „Einführung in Reinforcement Learning“

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Lehrbuch:

R. Sutton and A. Barto: Reinforcement Learning: An Introduction. MIT Press, 1998.

HTML-Version kostenlos verfügbar unter: http://webdocs.cs.ualberta.ca/~sutton/book/the-book.html

PPT-Folien zum Lehrbuch: http://webdocs.cs.ualberta.ca/~sutton/book/Slides/

Open-Source RL-Toolbox: http://sourceforge.net/projects/teachingbox/

RL-Mailingliste: https://groups.google.com/forum/#!forum/rl-list

Videos-Links:

The Neuroscience of Reinforcement Learning: http://videolectures.net/icml09_niv_tnorl/

Thorndike - The Law of Effect: http://www.youtube.com/watch?v=Vk6H7Ukp6To

Towards Learning Robot Table Tennis: https://www.youtube.com/watch?v=SH3bADiB7uQ

Pigeon Solves Box-and-Banana-Problem: http://www.youtube.com/watch?v=mDntbGRPeEU

Randomized Ensemble Reinforcement Learning in Mario AI: http://tokic.com/www/tokicm/mario.php.html

Empfohlene Literatur:

N. J. van Eck and M. van Wezel. 2008. Application of reinforcement learning to the game of Othello. Comput. Oper. Res. 35, 6. 1999-2017.

S. Faußer and F. Schwenker: Neural Approximation of Monte Carlo Policy Evaluation Deployed in Connect Four. In Proceedings of the 3rd International Workshop on Artificial Neural Networks in Pattern Recognition (ANNPR 2008). pp. 90 - 100, Springer, 2008.

F. Flentge: Aktionenlernen mit Selbstorganisierenden Karten und Reinforcement Learning, Dissertation, Universität Mainz, 2005.

T. Gabel, C. Lutz and M. Riedmiller. Improved Neural Fitted Q Iteration Applied to a Novel Computer Gaming and Learning Benchmark. In Proceedings of the IEEE Symposium on Approximate Dynamic Programming and Reinforcement Learning (ADPRL 2011). IEEE Press, Paris France, April 2011.

T. Kietzmann and M. Riedmiller. The Neuro Slot Car Racer: Reinforcement Learning in a Real World Setting. Proceedings of the Int. Conference on Machine Learning Applications (ICMLA09). Springer, Miami, Florida, Dec 2009.

M. Tokic and G. Palm: Adaptive exploration using stochastic neurons. In Proceedings of the 22nd International Conference on Artificial Neural Networks (ICANN 2012), volume 7553 of Lecture Notes in Computer Science, pages 42-49. Springer Berlin / Heidelberg, 2012.

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