Bernoullis Tafelrunde

Graduate Student Seminar

Thursday, 12 October 2017, 12:15-13:00
Seminarraum 05.002, Spiegelgasse 5

Yannic Kilcher

ETH Zürich

Introduction to Deep Reinforcement Learning for Non-Machine-Learners

Abstract

Deep Reinforcement Learning has gained publicity in recent years due to a number of high profile achievements, such as learning to play classic Atari games on a superhuman level [1] as well as beating the world's best Go players [2]. In this talk, I will discuss the various elements that make up modern Deep Reinforcement Learning systems. This includes the basics of the Machine Learning field, especially Deep Learning, an introduction to classic Reinforcement Learning and Artificial Intelligence, common modern approaches to integrating these fields, as well as selected examples from the frontier of current research. The talk is aimed at people with little ML knowledge.

[1] Mnih, Volodymyr, et al. "Human-level control through deep reinforcement learning." *Nature* 518.7540 (2015): 529-533.

[2] Silver, David, et al. "Mastering the game of Go with deep neural networks and tree search." *Nature* 529.7587 (2016): 484-489.