
TACKLING REINFORCEMENT LEARNING WITH DEEP NEURAL NETWORKS

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ABSTRACT

Reinforcement learning has been long deployed in learning problems for unknown environments. In intricate environments, the mapping from observations to either value or policy can be complicated to be learned or described. In recent years, deep neural networks has been proven to be capable of depicting the relations of images and labels, which shows considerable generalization capacity. More recently, it has been used in core components in reinforcement learning framework, such as q-value functions [1], state representation learning [2, 3] etc.. In this paper, we introduce this series of work which is called deep reinforcement learning. In this presentation, we will first give a brief introduction of the computational model of reinforcement learning and what is the complexity of this problem. Then, two representative works in deep reinforcement learning will be discussed in detail.

References

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