
Machine learning and control theory

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Abstract

We discuss the connections between Machine Learning and Control Theory. For instance, Reinforcement Learning uses the formalism of MDP, Markov Decision Processes. On the other hand, Machine learning can be helpful to handle control problems of large dimensions. It turns out that some authors have shown that deep learning can be considered as a control problem, in which time corresponds to the level of layers. We also discuss the connection between identification and learning, the joint learning and decision-making problem, with Bayesian approaches.

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