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A Crash Course on Reinforcement Learning

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The emerging field of Reinforcement Learning (RL) has led to impressive results in varied domains like strategy games, robotics, etc. This handout aims to give a simple introduction to RL from control perspective and discuss three possible approaches to solve an RL problem: Policy Gradient, Policy Iteration, and Model-building. Dynamical systems might have discrete action-space like cartpole where two possible actions are +1 and -1 or continuous action space like linear Gaussian systems. Our discussion covers both cases.