Introduction on Bandit Problem and Its Applications

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Abstract

Multi-armed bandit problem is a crystallized instance of sequential decision-making problems in uncertain environments. Algorithms for the bandit problem gives some answer in balancing the exploration (acquisition of information) and the exploitation (immediate reward) under uncertainty. This talk consists of two parts: The first part gives a quick introduction of the bandit problem and related applications. The second part introduces recent advances in stochastic bandit problem in machine learning.