Let's Try Some Bandits (practical)

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IADS Analytics, Data Science & Decision Making Summer School 2022
2022-08-01

Overview

We have a set multi-armed bandits inspired by real data (obtained from Celtra Dynamic Creative Optimization system).

Stochastic with reward either 0 or 1 (Bernoulli bandit)

Budget-limited (from 500 up to 30.000 pulls)

10 stationary cases

10 non-stationary cases (multiple segments with stationary probabilities)

Practical Work

1. Download the code, test it executes successfully (easiest in Google Colab)
2. Implement and measure the performance of bandit policies:
   a. Epsilon-greedy
   b. UCB1
   c. Thompson sampling
   d. (advanced) UCB-Tuned
3. Test different algorithms' parameters
4. Own ideas for further improvement?

Use Main.py to run and configure your experiment

Add your bandit policies to Agent.py