

PPO Market Bot

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PPO Training

Fixed parameters

Discount factor $\gamma = 0.99$

Learning rate $\alpha = 3 \times 10^{-4}$

Generalized Advantage Estimation parameter $\lambda = 0.95$

Policy clipping coefficient $\epsilon = 0.2$



Training 1 - Analysis

Parameters

Episodes : 300

Epochs per update : 10

Batch size : 128



Training 1 - Analysis



Figure 1: Training 1 - Training of trial 1



Figure 2: Training 1 - Test of trial 1



Training 1 - Analysis



Figure 3: Training 1 - Training of trial 2



Figure 4: Training 1 - Test of trial 2



Training 1 - Analysis



Figure 5: Training 1 - Training of trial 3



Figure 6: Training 1 - Test of trial 3



Training 1 - Analysis



Figure 7: Training 1 - Training of trial 4



Figure 8: Training 1 - Test of trial 4



Training 1 - Analysis



Figure 9: Training 1 - Training of trial 5



Figure 10: Training 1 - Test of trial 5



Training 1 - Analysis

| Trial | Training Profit | Testing Profit | Annual Return | Annual Volatility | Sharpe Ratio | Max Drawdown |
|-------|-----------------|----------------|---------------|-------------------|--------------|--------------|
| 1 | -822.5 | 74 | 0.17\$/year | 0.17 | -0.07 | -0.20 |
| 2 | 4.5 | 3 | 0.01\$/year | 0.01 | 0.71 | 0.00 |
| 3 | 0 | 0 | 0.00\$/year | 0.00 | 0 | 0.00 |
| 4 | 3930.5 | 0 | 0.13\$/year | 0.13 | 0.10 | -0.11 |
| 5 | 0 | 0 | 0.00\$/year | 0.00 | 0 | 0.00 |

Figure 11: Summary of the trials performances



Training 2 - Analysis

Parameters

Episodes : 200

Epochs per update : 50

Batch size : 128



Training 2 - Analysis

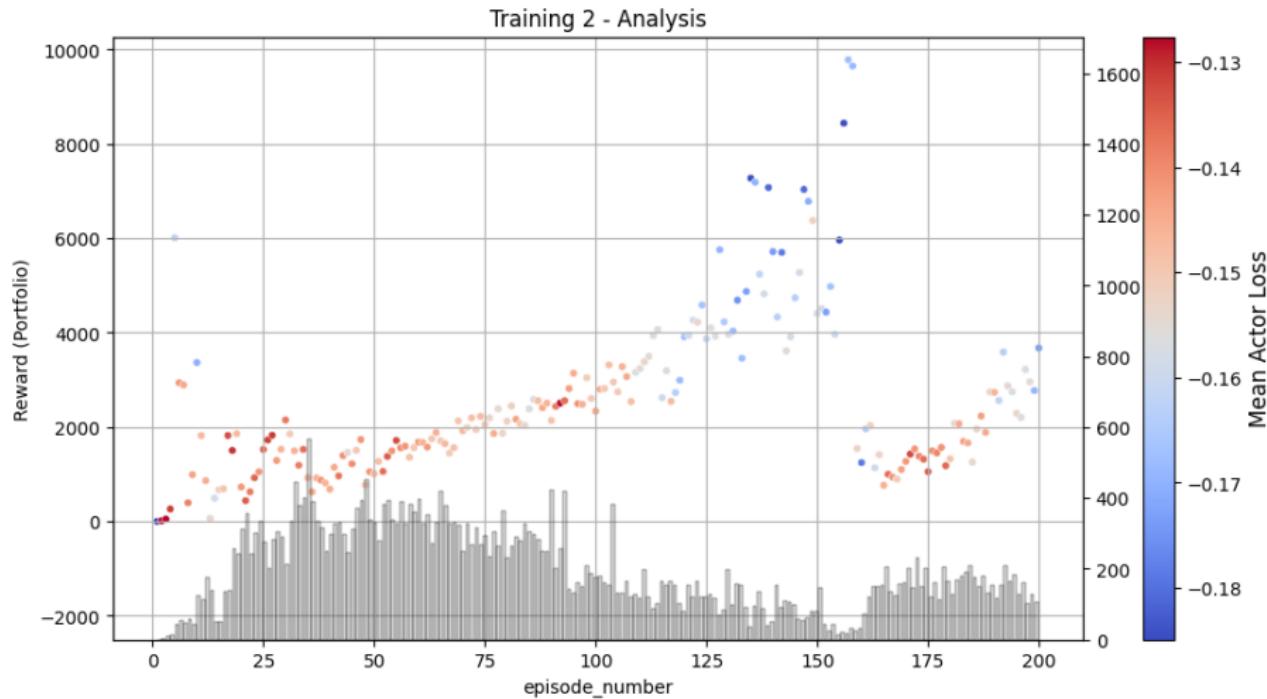


Figure 12: Training 2 - Training thru the epochs



Training 2 - Analysis



Figure 13: Training 2 - Training of trial 1



Figure 14: Training 2 - Test of trial 1



Thank You

