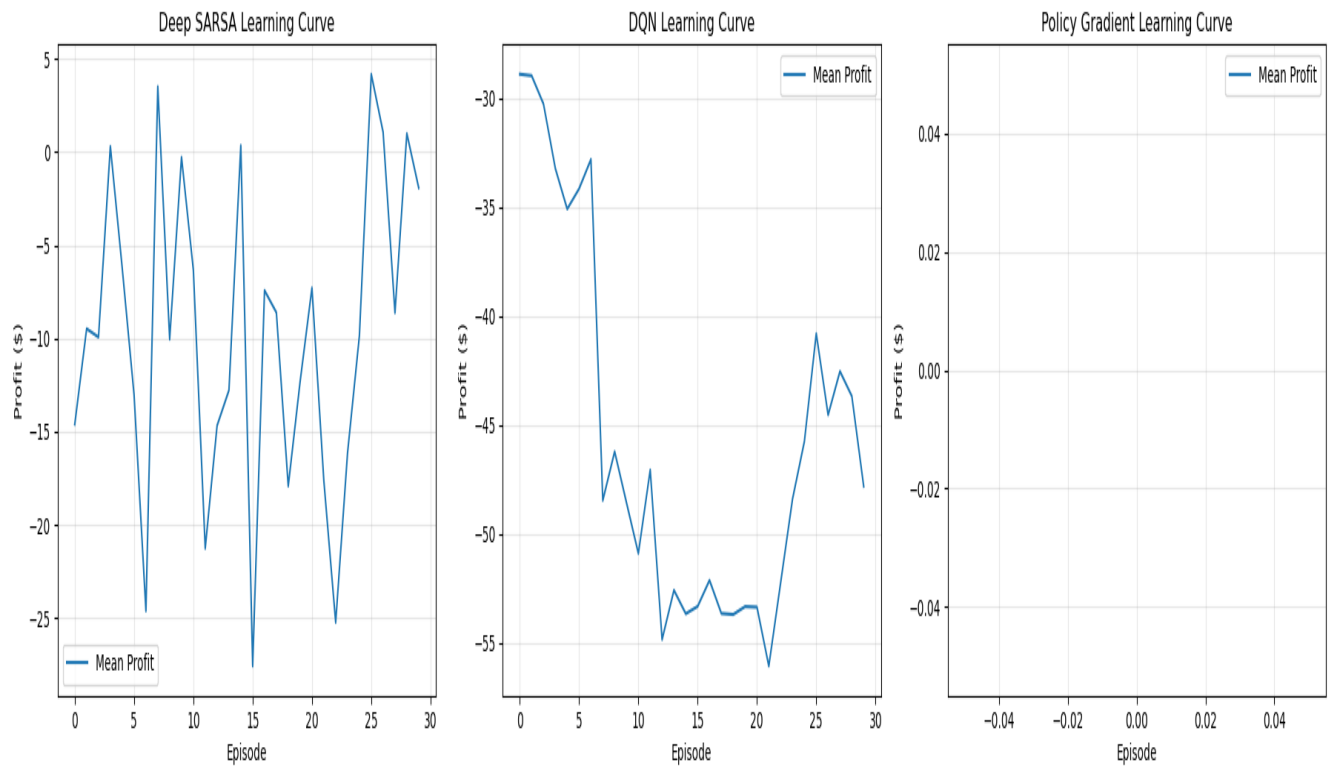# Training Results for GAS Bad Period

## Hyperparameters:

Episodes: 30 Gamma: 0.6 Alpha: 0.7 Epsilon Start: 0.8 Epsilon Min: 0.2 Epsilon Decay: 0.9 NN
Epochs: 10 NN LR: 1e-05 Enabled Agents: [1, 1, 1]

## Training Results:

| Agent | Average Final Profit | Best Profit | Worst Profit | Peak Training Profit | Annual Return Rate | Total Return |
|---|---|---|---|---|---|---|
| Deep SARSA | $-1.92 ± $96.84 | $255.40 | $-132.59 | $4.17 | -0.10% | -0.19% |
| DQN | $-47.81 ± $56.09 | $55.69 | $-137.73 | $-28.89 | -2.44% | -4.78% |
| Policy Gradient | $-43.54 ± $52.28 | $44.45 | $-146.18 | N/A | -2.22% | -4.35% |
| Random Policy Baseline | $-43.54 ± $52.28 | N/A | N/A | N/A | -2.22% | -4.35% |

## Learning Curves:



## Profit Percentiles:

**Độ biến thiên hiệu suất qua mỗi vòng lặp - GAS(bad)**