

PrimAITE 3.0.0 Learning Benchmark

PrimAITE Dev Team

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1 Introduction

PrimAITE v3.0.0 was benchmarked automatically upon release. Learning rate metrics were captured to be referenced during system-level testing and user acceptance testing (UAT). The benchmarking process consists of running 5 training session using the same config file. Each session trains an agent for 1000 episodes, with each episode consisting of 128 steps. The mean reward per episode from each session is captured. This is then used to calculate a combined average reward per episode from the 5 individual sessions for smoothing. Finally, a 25-widow rolling average of the combined average reward per session is calculated for further smoothing.

2 System Information

2.1 Python

| | |
|----------------|---|
| Version | 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] |
|----------------|---|

2.2 System

| | |
|-------------------|--|
| OS | Windows |
| OS Version | 10.0.22631 |
| Machine | AMD64 |
| Processor | Intel64 Family 6 Model 142 Stepping 12, GenuineIntel |

2.3 CPU

| | |
|-----------------------|------------|
| Physical Cores | 4 |
| Total Cores | 8 |
| Max Frequency | 2304.00Mhz |

2.4 Memory

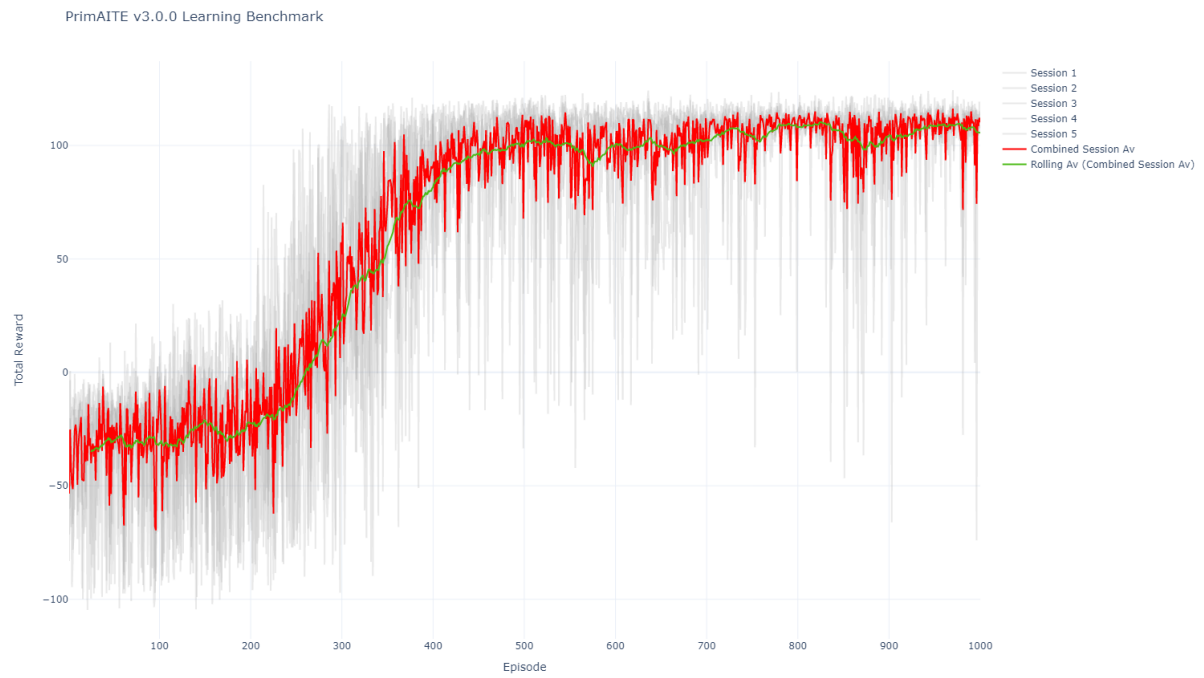
| | |
|--------------|---------|
| Total | 15.68GB |
|--------------|---------|

3 Stats

| | |
|---|----------|
| Total Sessions | 5 |
| Total Episodes | 5000 |
| Total Steps | 640000 |
| Av Session Duration (s) | 989.4601 |
| Av Step Duration (s) | 0.0155 |
| Av Duration per 100 Steps per 10 Nodes (s) | 1.5460 |

4 Graphs

4.1 v3.0.0 Learning Benchmark Plot



4.2 Learning Benchmarking of All Released Versions under Major v3.*.*

