**EXPERIMENTAL RAW DATA**

Variable Total Memory – Inception

m-TOPO

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 1788541964.0 | 1788396066.0 | 2002975302.0 | 2006535570.0 | 3218954569.0 |
| 7 | 106991574.6 | 110952547.2 | 90573304.6 | 103297000.0 | 100483980.0 |
| 9 | 104566215.464 | 103102459.592 | 79473247.792 | 88267151.608 | 75486791.4 |
| 10 | 104559823.246 | 103052593.659 | 79446382.9792 | 88164619.4608 | 75369058.44 |
| 11 | 104559184.025 | 103047607.066 | 79443696.4979 | 88156213.1539 | 75357285.144 |

m-ETF

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 912036469.0 | 1781115856.0 | 1781565136.0 | 1781339696.0 | 1258090616.0 |
| 7 | 83997143.2 | 78463462.0 | 75535546.8 | 76336379.2 | 76066543.2 |
| 9 | 77173143.408 | 67671036.152 | 67005572.168 | 66808977.272 | 66714896.784 |
| 10 | 76498780.08 | 66570846.7632 | 65815464.992 | 65631474.488 | 65598324.3568 |
| 11 | 76765561.6554 | 66487213.92 | 65742039.847 | 65528811.6816 | 65495451.2269 |

m-SCT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 914212969.0 | 1782265900.0 | 1781913712.0 | 1781908294.0 | 1781715756.0 |
| 7 | 94435693.6 | 90544280.0 | 86740861.6 | 88911979.8 | 88847876.4 |
| 9 | 76675901.672 | 60299394.424 | 66453171.296 | 66393796.04 | 66312916.04 |
| 10 | 71126817.7784 | 58897351.0144 | 65469926.1744 | 65669463.5648 | 65224668.2864 |
| 11 | 70540864.6499 | 61556653.8563 | 62644322.9645 | 65533277.5027 | 65098261.4205 |

Variable Total Memory – Mnist CNN

m-TOPO

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 229.020843 | 357.447402 | 228.996842 | 301.23288 | 178.904866 |
| 7 | 2.5063086 | 3.7668132 | 2.4823076 | 3.18744 | 2.0645716 |
| 9 | 0.4869916 | 0.5859614 | 0.5872238 | 0.59609421 | 0.57044842 |
| 11 | 0.48533254 | 0.58471954 | 0.58473217 | 0.58451199 | 0.55979758 |

m-ETF

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 200.910298 | 128.461753 | 128.6422 | 128.461736 | 128.461724 |
| 7 | 2.2295662 | 1.2956986 | 1.2956686 | 1.2956816 | 1.2956696 |
| 9 | 0.47812881 | 0.47806 | 0.4930858 | 0.4730074 | 0.4830296 |
| 11 | 0.47325753 | 0.47320526 | 0.47336741 | 0.47316212 | 0.47315835 |

m-SCT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 128.461739 | 128.461726 | 128.461722 | 128.46172 | 128.461718 |
| 7 | 1.2957636 | 1.4802986 | 1.2956676 | 1.2956656 | 1.2956636 |
| 9 | 0.4860186 | 0.4798036 | 0.4772858 | 0.4772728 | 0.4772638 |
| 11 | 0.47333535 | 0.47324935 | 0.47322335 | 0.47321035 | 0.47320035 |

Fixed Total Memory – Mnist CNN

m-TOPO

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 228.996867 | 233.116151 | 228.996853 | 301.232891 | 279.172853 |
| 7 | 2.4823326 | 2.5465766 | 2.4823186 | 3.187451 | 2.9840786 |
| 9 | 0.584752 | 0.5859614 | 0.5872128 | 0.49741141 | 0.56770542 |
| 11 | 0.584752 | 0.58471954 | 0.58472117 | 0.48526599 | 0.55705458 |

m-ETF

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 128.461731 | 204.014249 | 128.461755 | 128.461741 | 241.562138 |
| 7 | 1.2956766 | 1.7282084 | 1.2957006 | 1.2956866 | 3.1307984 |
| 9 | 0.47310721 | 0.4931162 | 0.4742698 | 0.4868038 | 0.50435081 |
| 11 | 0.47325753 | 0.47331715 | 0.47321688 | 0.47320388 | 0.47334864 |

m-SCT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 5 | 128.461739 | 128.461726 | 128.461722 | 200.910216 | 314.10933 |
| 7 | 1.2956846 | 1.7567492 | 1.2956676 | 2.181583 | 2.181569 |
| 9 | 0.47741141 | 0.47733081 | 0.47730381 | 0.48856641 | 0.50738641 |
| 11 | 0.47331235 | 0.47328153 | 0.47320435 | 0.4732907 | 0.47323153 |

Fixed Total Memory – Inception

m-TOPO

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 7 | 106991574.6 | 110952547.2 | 90573304.6 | 96253828.0 | 98149269.0 |
| 9 | 104675812.84 | 103631827.12 | 80002174.92 | 82301822.04 | 74578808.92 |
| 10 | 104566215.464 | 103102459.592 | 79473247.792 | 81224015.608 | 73152080.4 |
| 11 | 104559823.246 | 103052593.659 | 79446382.9792 | 81121483.4608 | 73034347.44 |

m-ETF

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 7 | 83997143.2 | 78463462.0 | 75535546.8 | 76336379.2 | 75250528.2 |
| 9 | 78180050.68 | 70705599.76 | 69211976.24 | 69492443.84 | 69295436.44 |
| 10 | 77173143.408 | 67671036.152 | 67005572.168 | 66808977.272 | 66714896.784 |
| 11 | 76498780.08 | 66570846.7632 | 65815464.992 | 65631474.488 | 65598324.3568 |

m-SCT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth/proc | 3 | 6 | 9 | 12 | 15 |
| 7 | 94435693.6 | 90544280.0 | 86740861.6 | 106614072.6 | 117622485.8 |
| 9 | 76675901.672 | 60299394.424 | 66453171.296 | 66625385.928 | 66489936.968 |
| 10 | 71126817.7784 | 58897351.0144 | 65469926.1744 | 65669463.5652 | 65224668.2864 |
| 11 | 70540864.6499 | 61556653.8563 | 62644322.9645 | 65533277.5027 | 65098261.4205 |