Table 1: Performance Comparison for Dataset Length 2 *×* 1010, Pattern Length 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2\*n | 2\* Number of Pattern (2*n*) | Sequential (rabinKarp.cpp) | CUDA (rabinKarpCUDA.cu) | | 2\*Speedup |
| Running Time | Running Time | Memory Consumption |
| 3 | 8 | 884.00 ms | 4.26 ms | 9.5 mb |  |
| 4 | 16 | 1839.00 ms | 7.60 ms | 9.5 mb |  |
| 5 | 32 | 3575.00 ms | 14.33 ms | 9.5 mb |  |
| 6 | 64 | 7204.00 ms | 27.89 ms | 9.5 mb |  |
| 7 | 128 | 14236.00 ms | 55.06 ms | 9.5 mb |  |
| 8 | 256 | 28824.00 ms | 86.84 ms | 9.6 mb |  |
| 9 | 512 | 55703.00 ms | 175.00 ms | 9.7 mb |  |
| 10 | 1024 | 113846.00 ms | 380.20 ms | 10 mb |  |

Table 1: Performance Comparison for Dataset Length 2 *×* 1010, Pattern Length 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2\*n | 2\* Number of Pattern (2*n*) | Sequential (ahoCorrasick) | CUDA (ahoCorrasickCUDA.cu) | | 2\*Speedup |
| Running Time | Running Time | Memory Consumption |
| 3 | 8 | 3092 ms | 536.32 ms | 9.5 mb |  |
| 4 | 16 | 3403 ms | 792.08 ms | 9.6 mb |  |
| 5 | 32 | 3458 ms | 3396 ms | 9.6 mb |  |
| 6 | 64 | 3584 ms | 1394.26 ms | 9.7 mb |  |
| 7 | 128 | 3938 ms | 1792.10 m | 10 mb |  |
| 8 | 256 | 4011 ms | 2377.14 ms | 10 mb |  |
| 9 | 512 | 4235 ms | 2954.38 ms | 12 mb |  |
| 10 | 1024 | 4909 ms | 3468.20 ms | 16 mb |  |