

4. Strong and weak scaling of parallel text processing using GPU

In parallel, use the GPU to process a coherent and comprehensible text of at least 4000 characters without spaces (equivalent to approximately 1 A4 page at font size 11 and line 1). Read the text from an external txt or word file and perform the following analysis.

- Statistics of the occurrence of individual letters (do not distinguish upper- and lower-case letters, do not distinguish individual characters).
- Statistics on the occurrence of each letter at the beginning of a sentence (following the period).

Discuss your GPU implementation as follows.

- Compare the speed with the parallel implementation on the CPU
- Perform strong and weak scaling and discuss the limits of your GPU implementation