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Cuda application

Computação em Larga Escala - Trabalho 3

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Row Processing – Programa 1

$0 \leq \text{idx} < (K \gg \text{iter})$
 $\text{subseq} = \text{seq} + N/K * (1 \ll \text{iter}) * \text{idx} \Rightarrow$
 $\Rightarrow \text{subseq}[i] = \text{seq}[N/K * (1 \ll \text{iter}) * \text{idx} + i] ,$
with $0 \leq i < (1 \ll \text{iter}) * N/K$

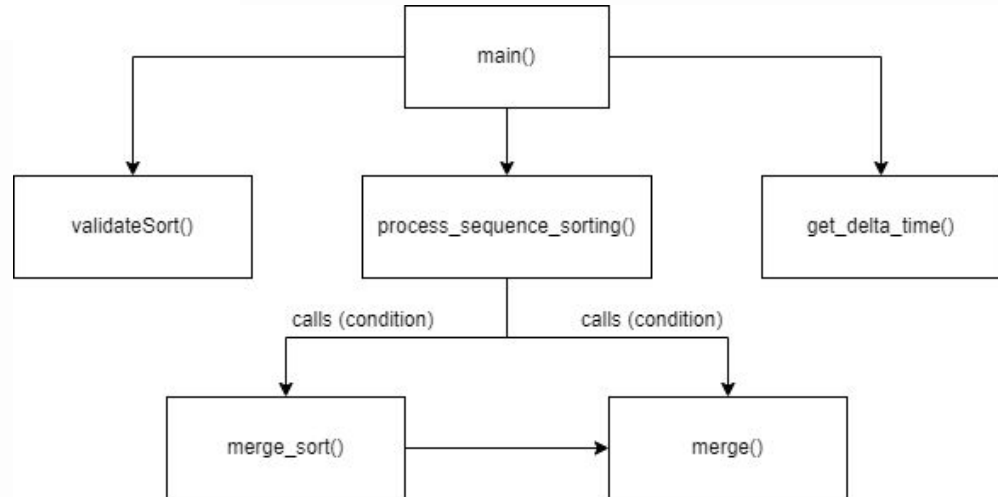
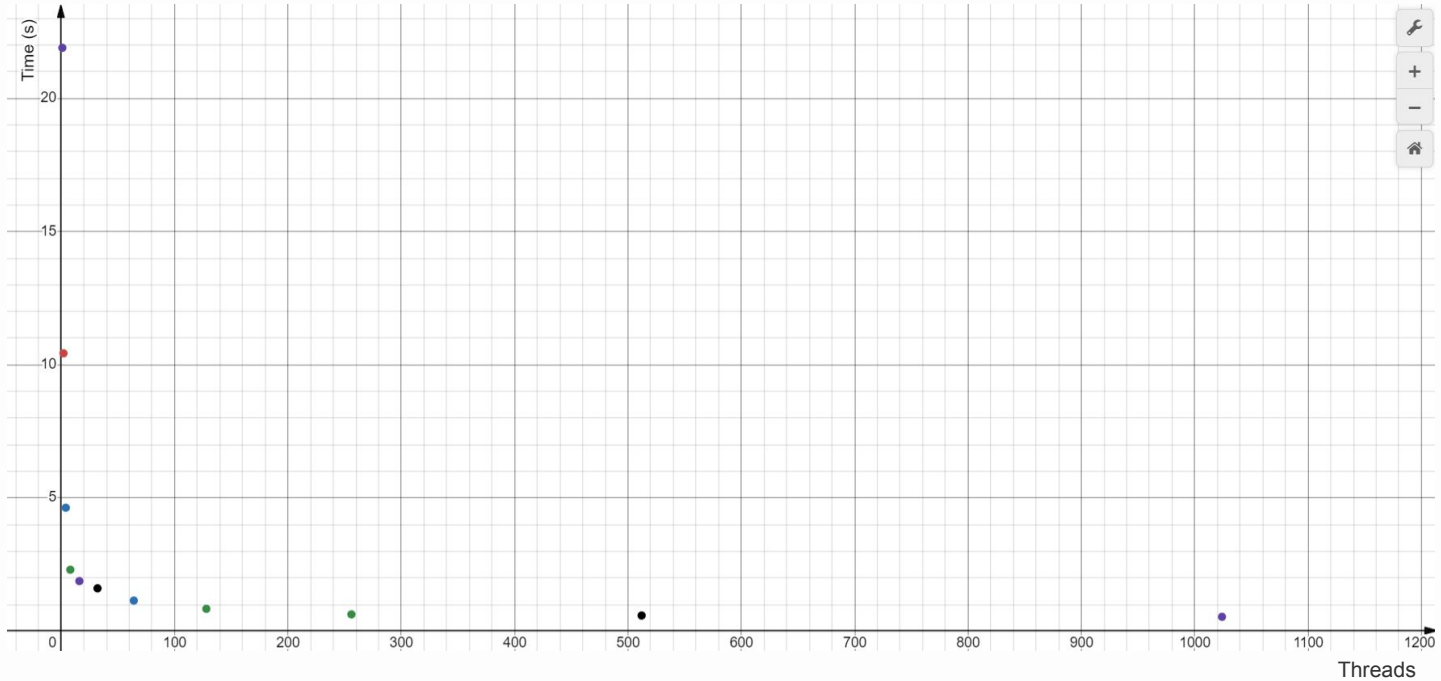


Gráfico tempo (s) por n° threads



Resultados Gerais

Worker threads (CPU)				GPU
1	2	4	8	Row (best time)
0.288296 s	0.200810 s	0.173446 s	0.161982 s	0.539154 s

Conclusões

"Is it worthwhile to use the GPU to solve this kind of problem?".

- GPU performance is worse than CPU performance, making use of GPU in this case not worthwhile.
- The time required to transfer data between CPU memory and GPU memory can be significant. For small problems, this overhead can make GPU usage less efficient than CPU usage.