Project #7b

Autocorrelation using MPI
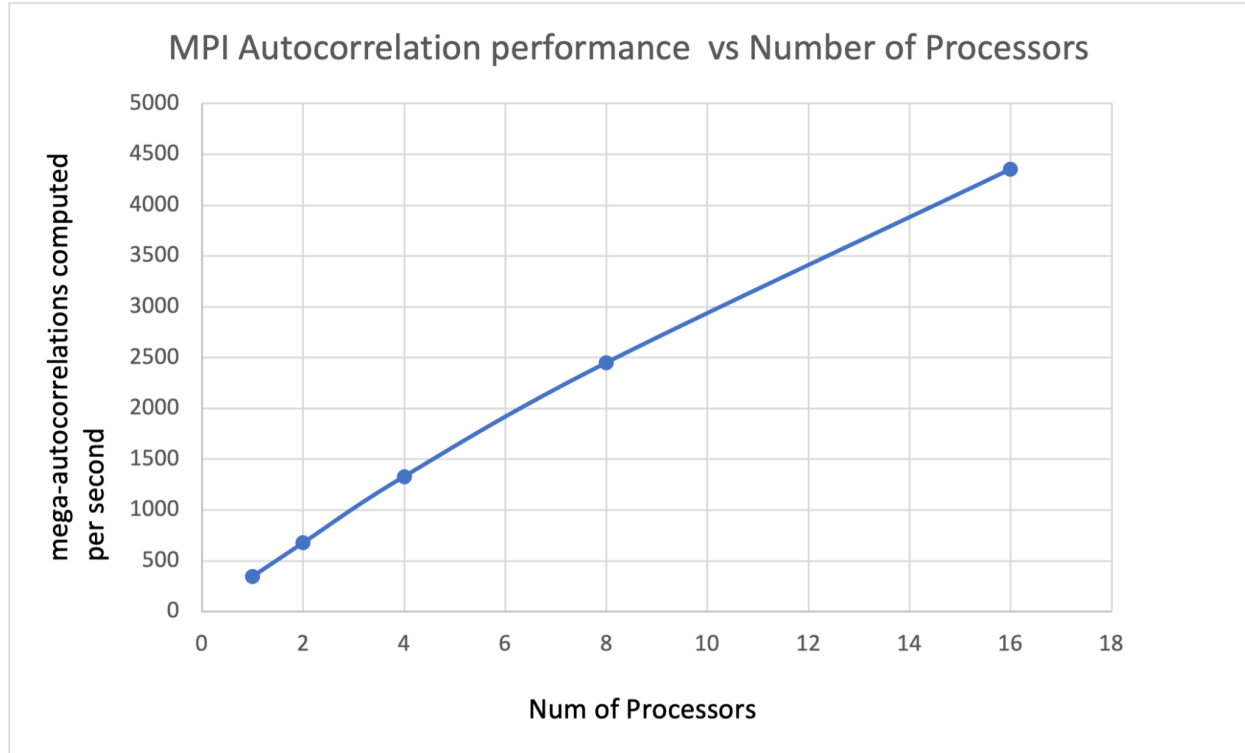
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1. Graph of Scatterplot
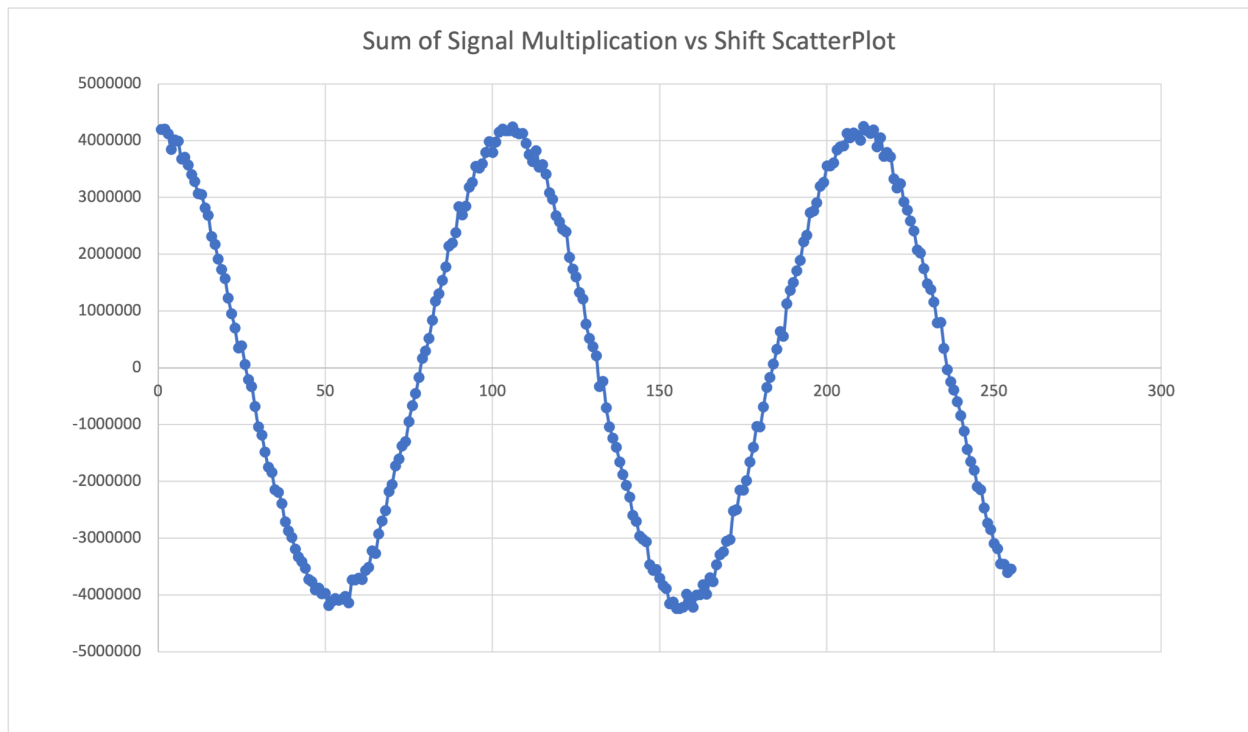
2. The secret sine-wave looks like the curve in the above graph. The shift in array's index is the secret to make the hidden sine wave appear.

3. Graph of different number of processors

MPI Autocorrelation performance vs Number of Processors

4. The pattern in the graph is that when doubling the number of processors, we get approximately double the performance.

5. I think it is because we have a distributor in this program. It can evenly distribute the number of elements to other processors numbers, so it gives a comparatively consistent trend. That's why the pattern looks linear.