HPC Project

Parallel High Pass Filter

Team ID: 16

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1. Apply padding to original image by ZERO in borders:

* Calculate padded height and padded width by adding 2 to original image height and width, 2 is come from size if used kernal (3\*3), so 2 come from (kernal width or height – 1).

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1. Cast Kernal to all processors:

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1. Sent to each processor part from image to apply kernal on it:

We used processor Zero as rote to read image and apply padding to it, then calculate row per processor and start index to send for each processor its part to apply filter.

* If processor take first part or last part of image we give it one row to make up padding from down for first part and make up from down for last part.
* If processor take its part from middle we make up padding from up and down.

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1. For first processor and last processor receive size of its part from original image, and then receive it part from image and apply filter on it.

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1. Do the same thing with rest of processors:

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1. Collect results from all processors and create final image result:

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