
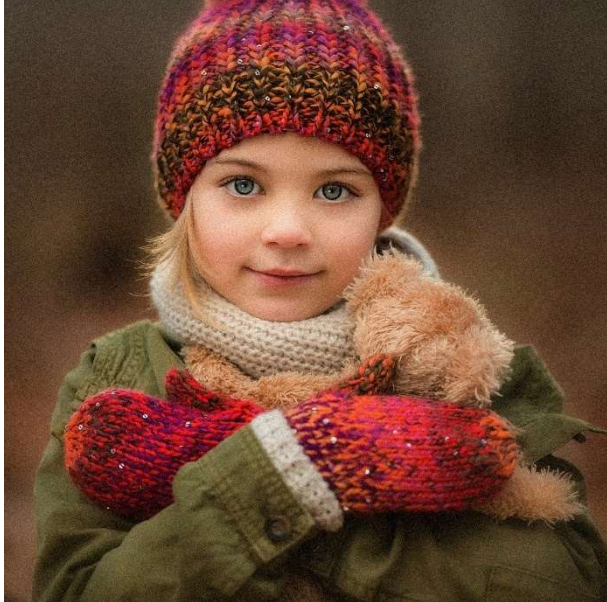


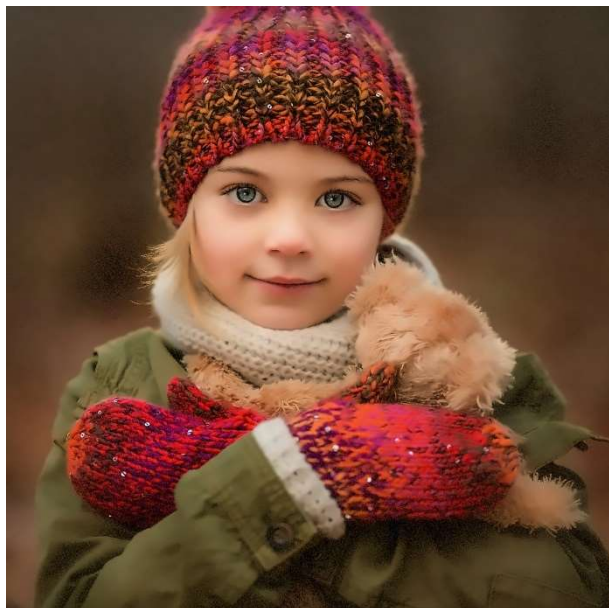


OBSERVATION TABLE : DENOISING IMAGE USING FAST NON LOCAL MEAN METHOD

INPUT IMAGE

<p>Noisy image</p> 	<p>1-1-5-13</p> 
<p>4-4-5-13</p> 	<p>7-7-9-21</p> 

10-7-9-21



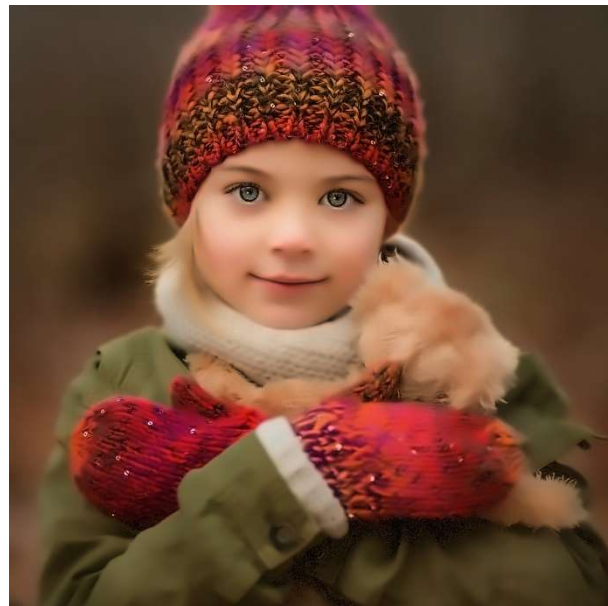
10-10-9-21



13-13-11-13



16-16-15-29





NOTE : In the above name format **XX-XX-XX-XX**, The first number represents the patch size to compute weights, second for window size to compute weighted average for given pixel, third for luminance strength and fourth for colour luminance.

OBSERVATION : The **Fast Non Local Mean** method to denoise image doesn't show effect up to 4-4-5-13, gives better result in between 10-7-19-21 to 13-13-11-13. And after 13-13-11-13 it starts losing the details of the image at high rate.

EFFECT OF COLOUR FACTOR @ 10-10-7-XX [XX=COLOR FACTOR]



At colour luminance factor = 5, image is still noisy, at 15, it's good but very few details are lost, and at < 25, there is major detail loss in the image.

EFFECT OF STRENGTH FACTOR FOR LUMEN COMPONENT

@10-10-XX-15

[XX = STRENGTH FACTOR]



OBSERVATION : From above table, it is clear that details are well preserved at strength factor = 3, but contains noise too, and at strength factor after 7 and higher, details are compromised but noise is highly removed.

So, best parameters for denoising an image using fast non local mean methods are :

Good Patch size to compute weight = 10

Good Window size to compute weighted average for given pixel = 10

Good Strength factor = 7

And good Luminance colour factor = 15

Now, testing some noisy images with parameters = **10-10-7-15**

INPUT IMAGES	CORRESPONDING OUTPUT
