REPORT

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Q4) After looking through the resized image by using both the interpolation methods namely Nearest Neighbour Interpolation and Bilinear Interpolation I have come to the conclusion that image resizing done using NNI - as the value of resizing factor increases the image starts becoming blocky, distorted and also the resulting image contains jagged edges as the factor increases Image Resizing done through NNI is fast as compared to BI.
On the other hand resizing done through bilinear interpolation is more complex than the NNI and so it has larger calculation. The resulting image is continuous and so the visual effect is better than NNI but the operation speed is slightly slower than NNI. There is some degree of fuzziness also in the resized image. Overall if one wants to have a good visual effect and is willing to sacrifice on the speed a little bit than BI is a better option than NNI and if one wants to have resized image faster than one should go for NNI for resizing.

Q5) After using all the parameters for smoothdata, I found lowess and sgolay to give the best result by denoising it.

Savitzky-Golay filters perform better in some applications than standard averaging FIR filters, which tend to filter high-frequency content along with the noise. Savitzky-Golay filters are more effective at preserving high frequency signal components but less successful at rejecting noise.