

Edge Preserved Smoothing using Bilateral Filtering

Pranav Sankhe 15007009

Kalpesh Krishna 140070017

Mohit Madan 15D070028

Report:

Here are the results for $\sigma_{\text{spatial}} = 1.1$ and $\sigma_{\text{intensity}} = 1.16$

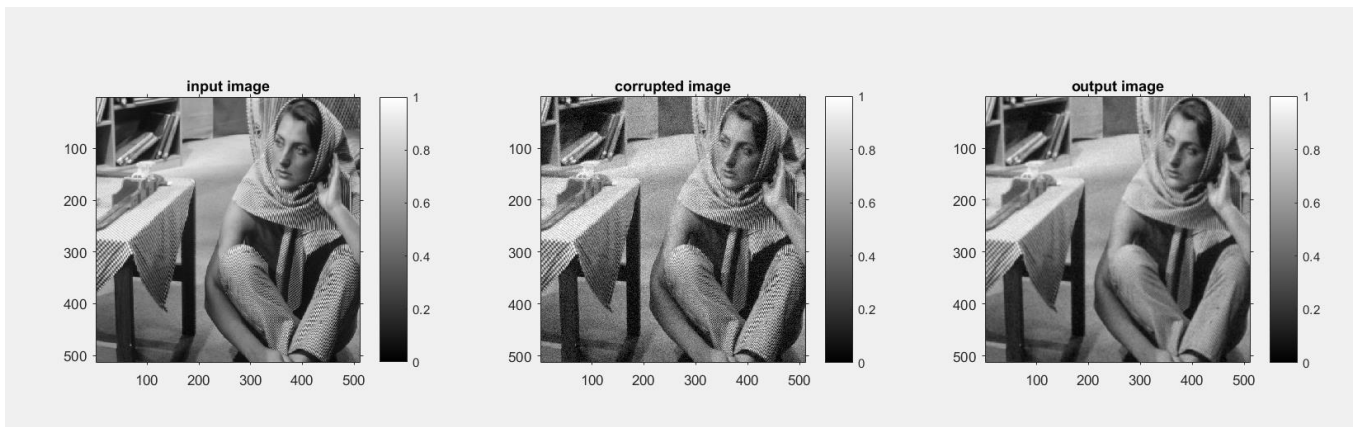


Figure1: Original, Corrupted and filtered images

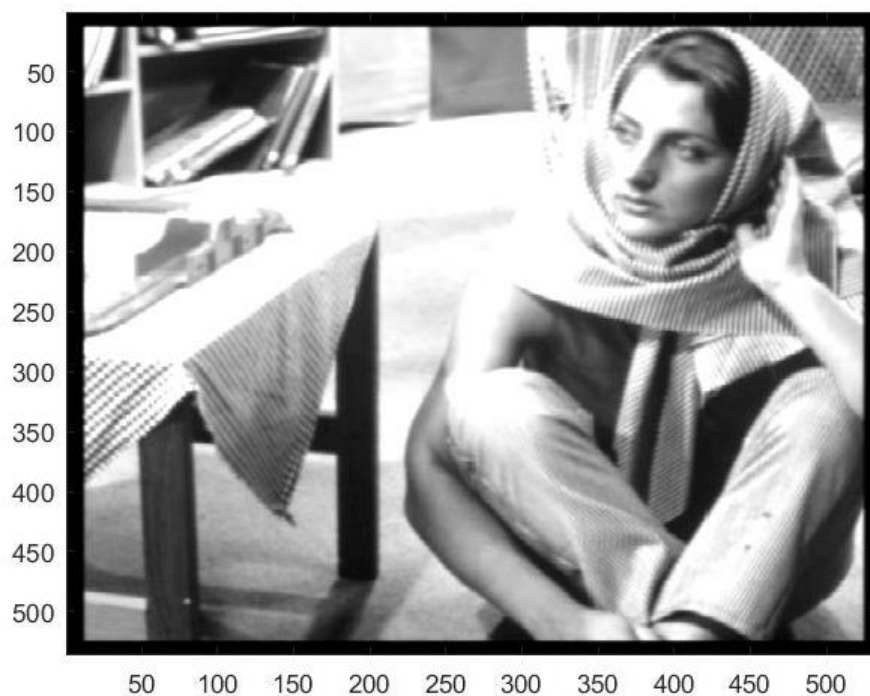


Figure2: mask for spatial gaussian as an image

Optimal Parameter Values are as follows:

$\text{Sigma_spatial} = 1.1$

$\text{Sigma_intensity} = 1.16$

RMSD for optimalparameter is 0.0056

RMSD for $1.1 * \text{sigma_spatial}$ = 0.0079

RMSD for $0.9 * \text{sigma_spatial}$ = 0.013

RMSD for $1.1 * \text{sigma_intensity}$ = 0.0076

RMSD for $0.9 * \text{sigma_intensity}$ = 0.0123