



**GALALA
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CSE281: Image Processing

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Lab: Thursday 1:10 – 2:50

Id: 221101235

Program: AIS

Dr :Gamal El-Din Fahmy

FALL : 2023_2024

Task of Image coloring

original image



Red Channel



Green Channel

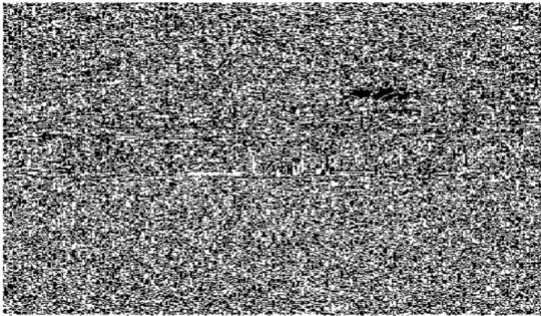


Blue Channel

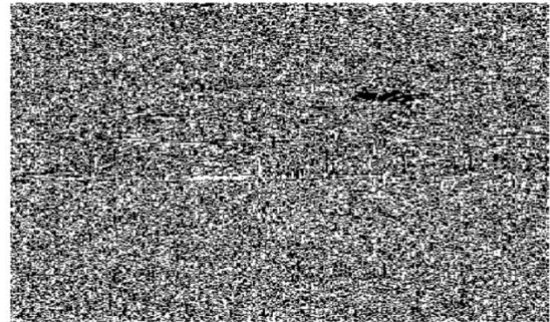


Convolution

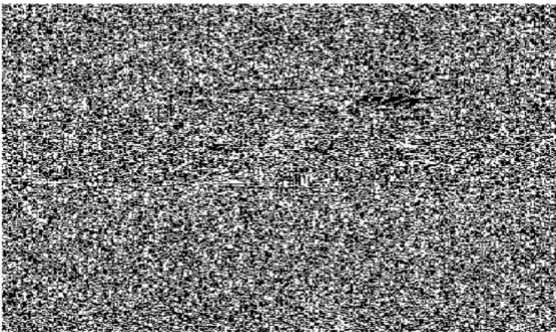
LaplacianconvolvedRed Image



LaplacianconvolvedGreen Image



LaplacianconvolvedBlue Image



LaplacianConvolved Image



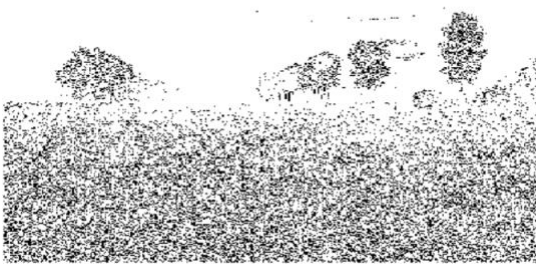
SharpeningconvolvedRed Image



SharpeningconvolvedGreen Image



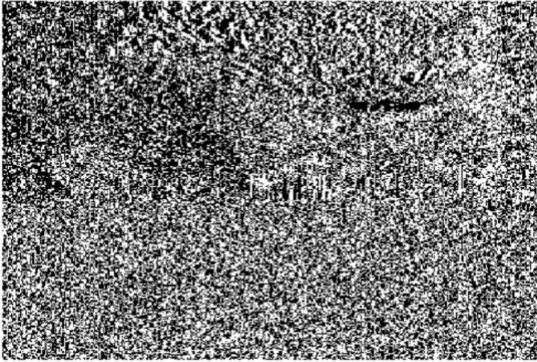
SharpeningconvolvedBlue Image



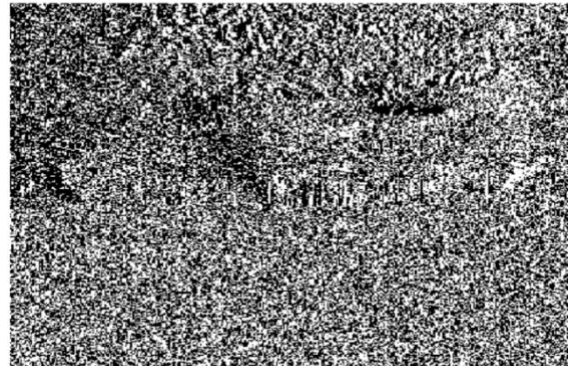
SharpeningConvolved Image



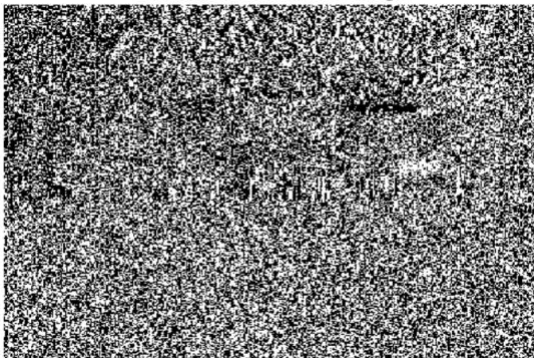
VerticalconvolvedRed Image



VerticalconvolvedGreen Image



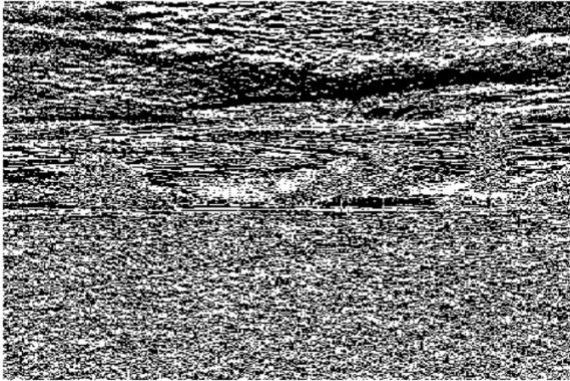
VerticalconvolvedBlue Image



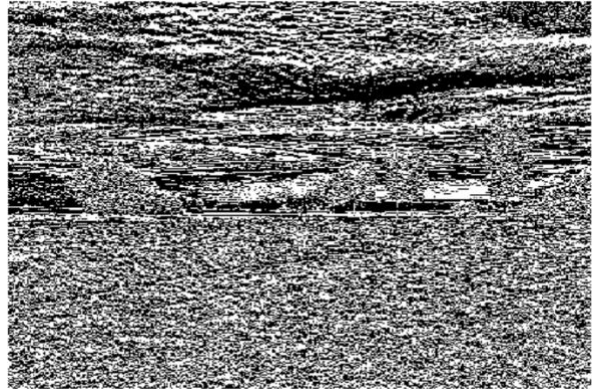
VerticalConvolved Image



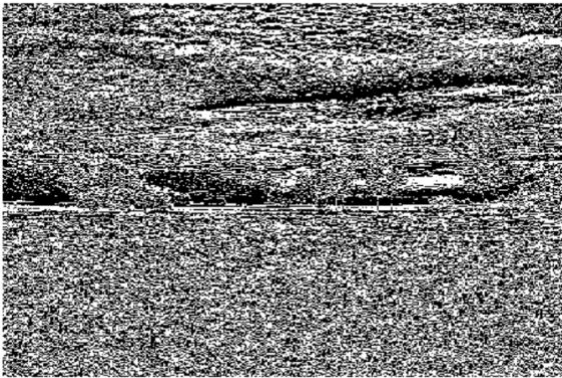
HorizontalconvolvedRed Image



HorizontalconvolvedGreen Image



HorizontalconvolvedBlue Image



HorizontalConvolved Image



Task of Edge Detection

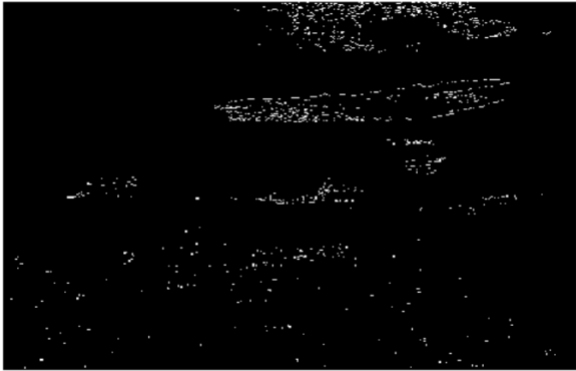
CannyedgeRedLow ImagelowThresh



edgeGreenLow ImagelowThresh



edgeBlueLow ImageLowThresh



CannyedgeRedHigh ImagehighThresh



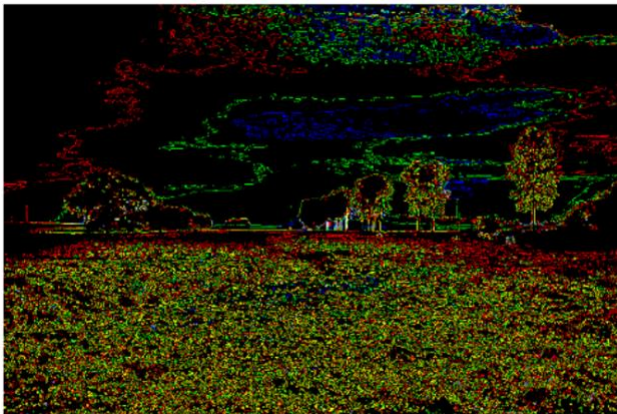
CannyedgeGreenHigh ImagehighThresh



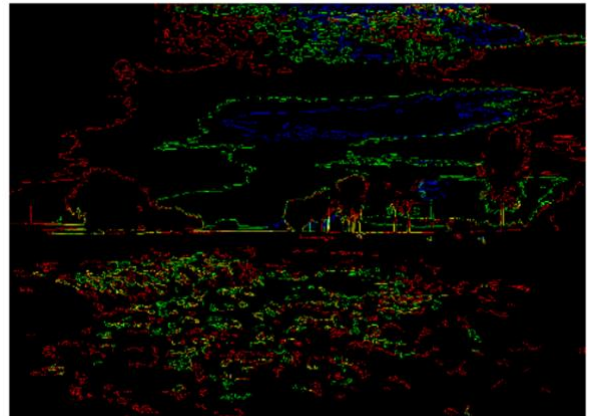
CannyedgeBlueHigh ImagehighThresh



Edges with Low Threshold



Edges with High Threshold



Task of Image Compression

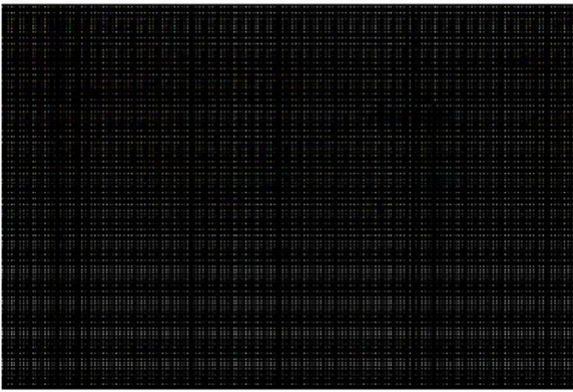
1:64 DCT Coefficients



1:64 Reconstructed Image



3:64 DCT Coefficients



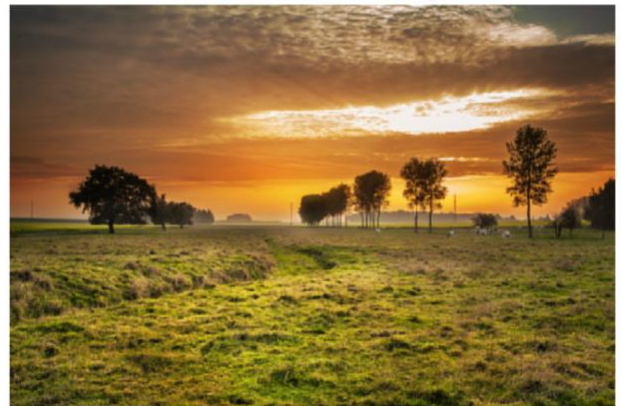
3:64 Reconstructed Image



6:64 DCT Coefficients



6:64 Reconstructed Image



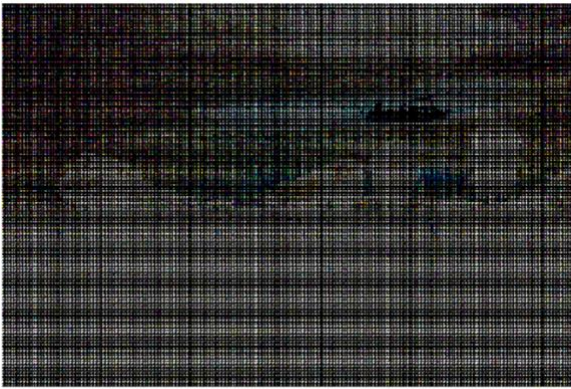
10:64 DCT Coefficients



10:64 Reconstructed Image



15:64 DCT Coefficients



15:64 Reconstructed Image



Original Image



Low Contrast Image



Task of Image Enhancement

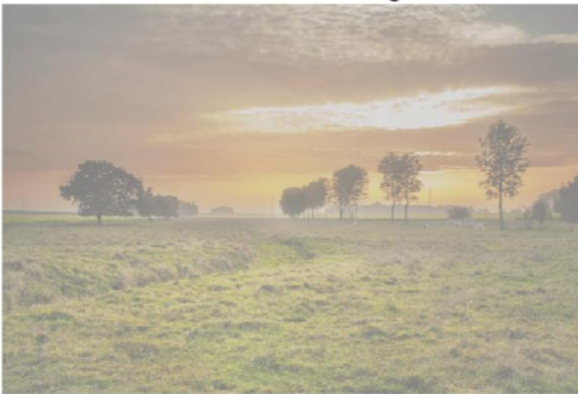
contrast adjustment for
Low Contrast Image



$\gamma=0.2$
Low Contrast Image



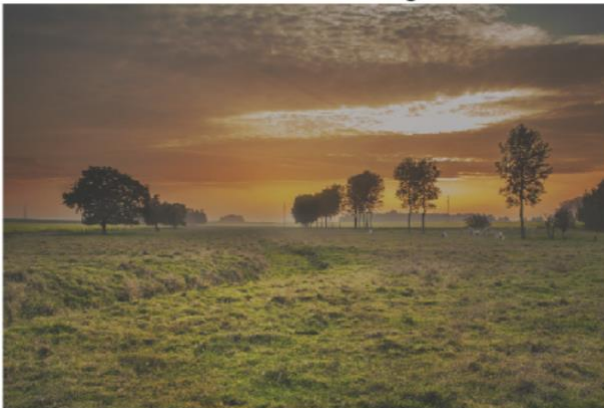
$\gamma=0.5$
Low Contrast Image



$\gamma=0.8$
Low Contrast Image

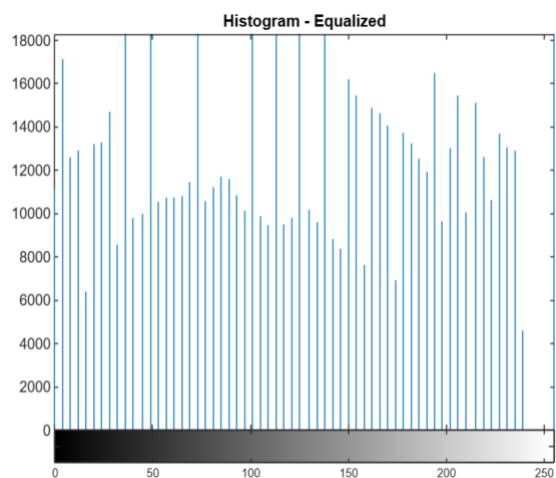
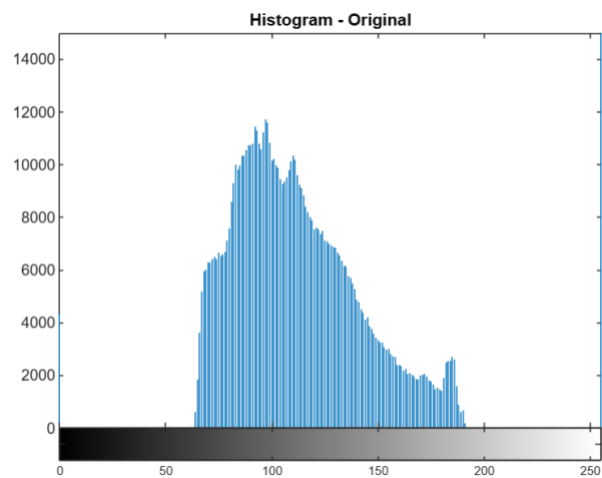


$\gamma=1.2$
Low Contrast Image



histogram equalization for
Low Contrast Image





histogram equalization to red channel for
Low Contrast Image



histogram equalization to green channel for
Low Contrast Image

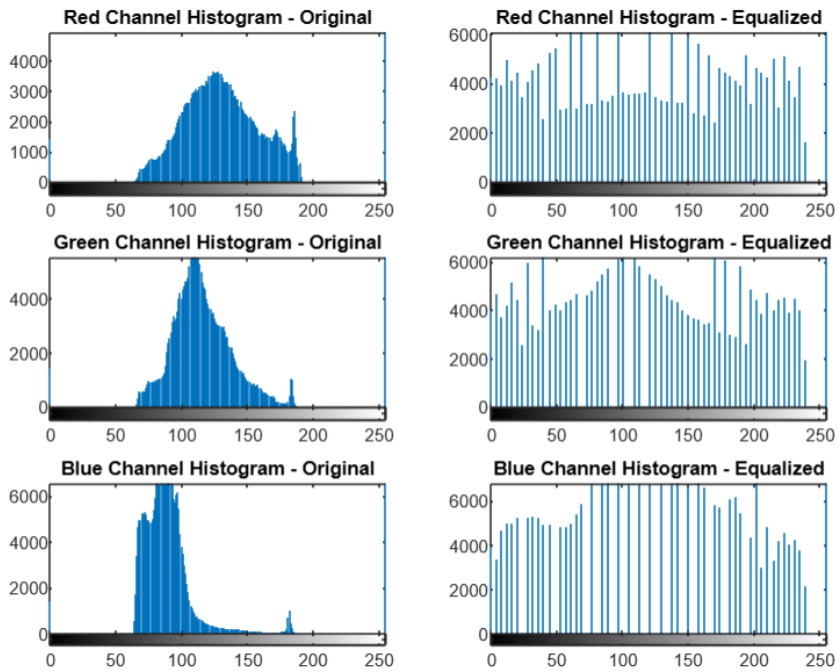


histogram equalization to blue channel for
Low Contrast Image



Histogram Equalization on Each Channel for
Low Contrast Image





[Video:](#)

