

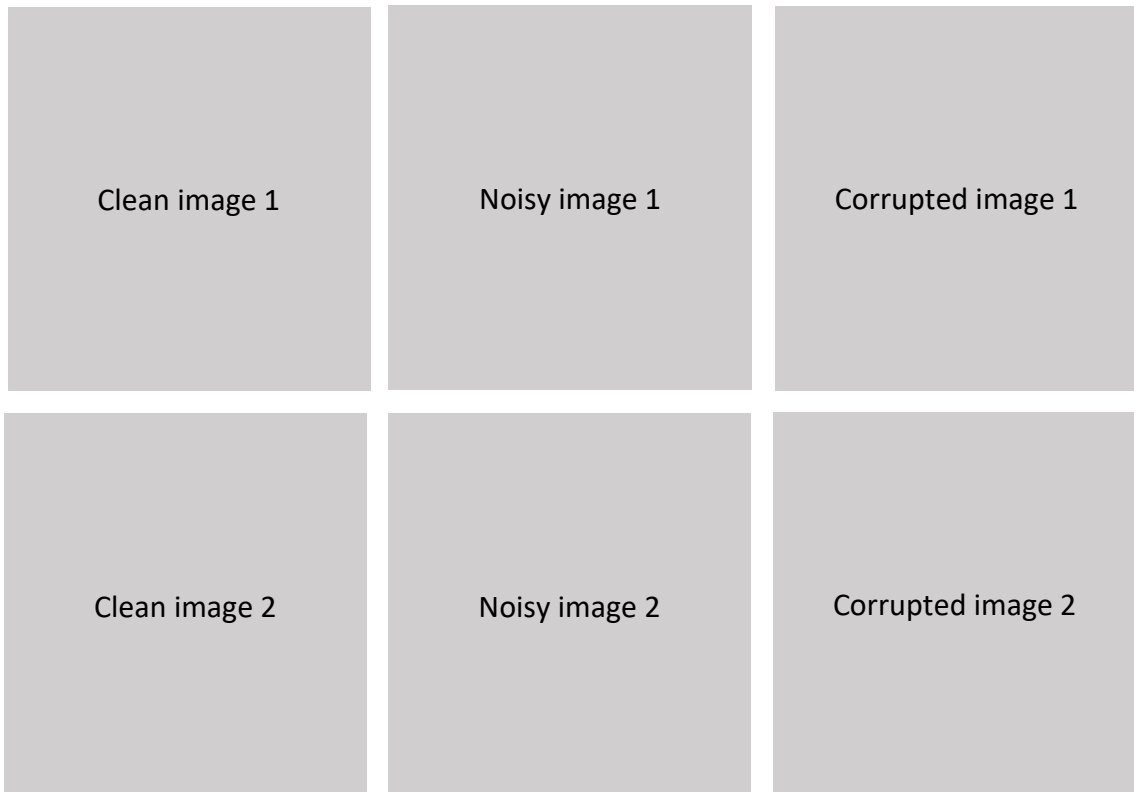
Final Project Report

Part A – Data Construction:

Discuss advice 2:



Show two clean images and their corresponding noisy and corrupted versions



Part B – Inpainting by the Oracle Estimator

Insert average PSNR result of the Oracle estimator:

Show clean, noisy, corrupted and Oracle-based reconstruction:

Clean image

Noisy image

Oracle reconstruction

Corrupted image

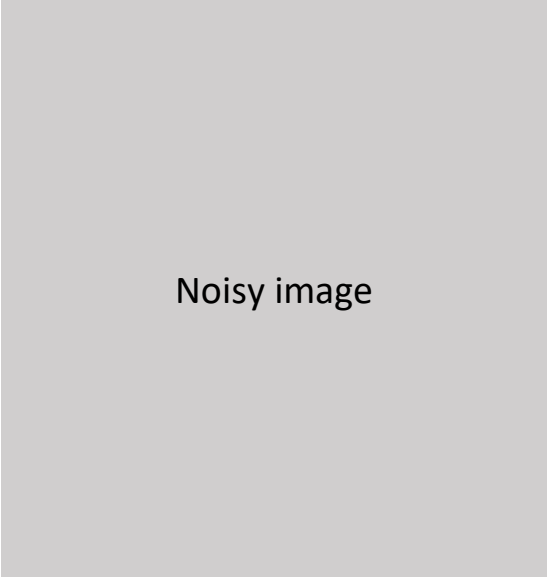
Part C – Inpainting by Greedy Pursuit

Insert average PSNR result of OMP:


Show clean, noisy, corrupted and OMP-based reconstruction:



Clean image



Noisy image



OMP reconstruction



Corrupted image

Compare between Oracle and OMP reconstructions:

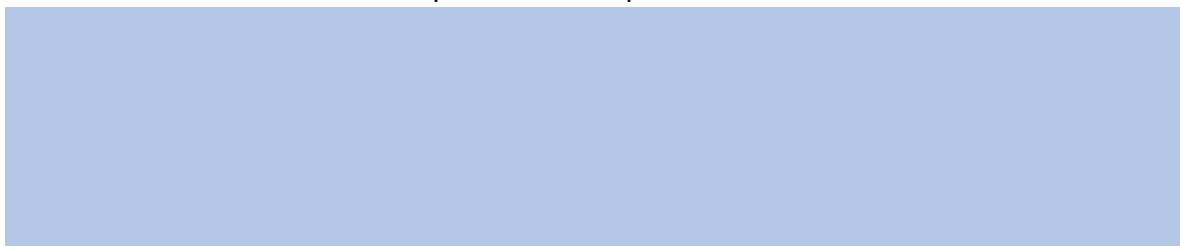


Oracle reconstruction

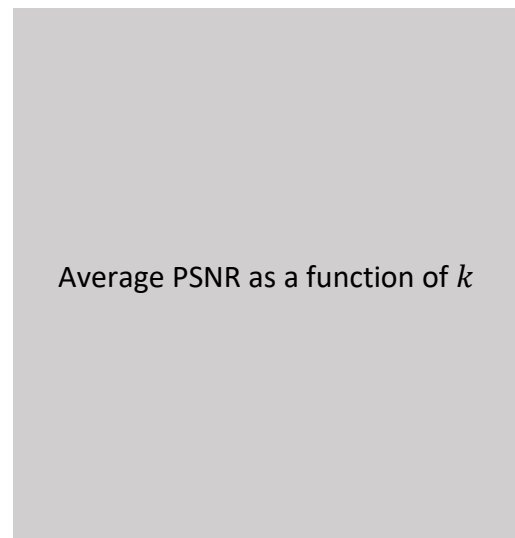


OMP reconstruction

Discuss results of OMP and compare to Oracle performance:

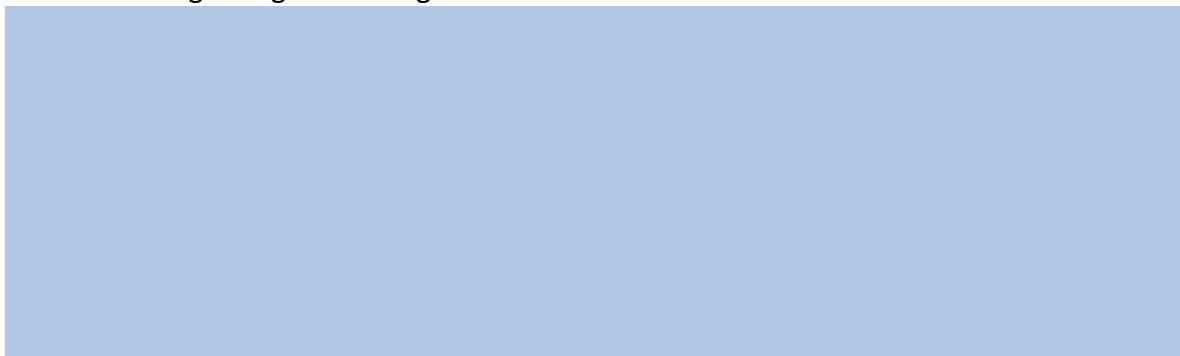


Show average PSNR of OMP as a function of k



Average PSNR as a function of k

Discussion regarding the average PSNR as a function of k :



Part D – Inpainting by Basis Pursuit

Insert average PSNR result of Basis-Pursuit:

Show clean, noisy, corrupted and BP-based reconstruction:

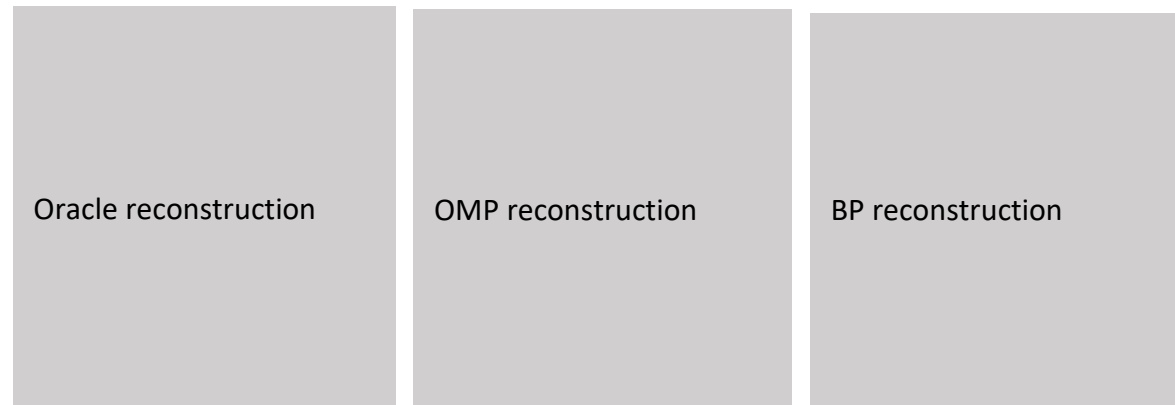
Clean image

Noisy image

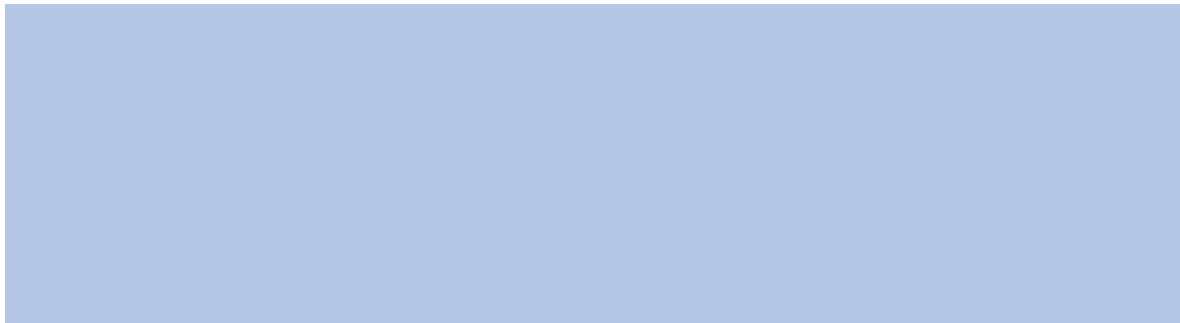
BP reconstruction

Corrupted image

Compare between Oracle and OMP and BP reconstructions:



Discuss results of BP and compare to greedy methods and to the oracle performance:




Show PSNR as a function of λ :



PSNR as a function of λ

Discuss how λ affects BP reconstruction:



Part E – Effect of Parameters

Show MSE as a function of p and σ :

MSE as a function of p

MSE as a function of σ

Discuss the effect of p :

Discuss the effect of σ :