Sparse Coding Minimizing ℓ_0: Denoising

Mathematical Models and Methods for Image Processing

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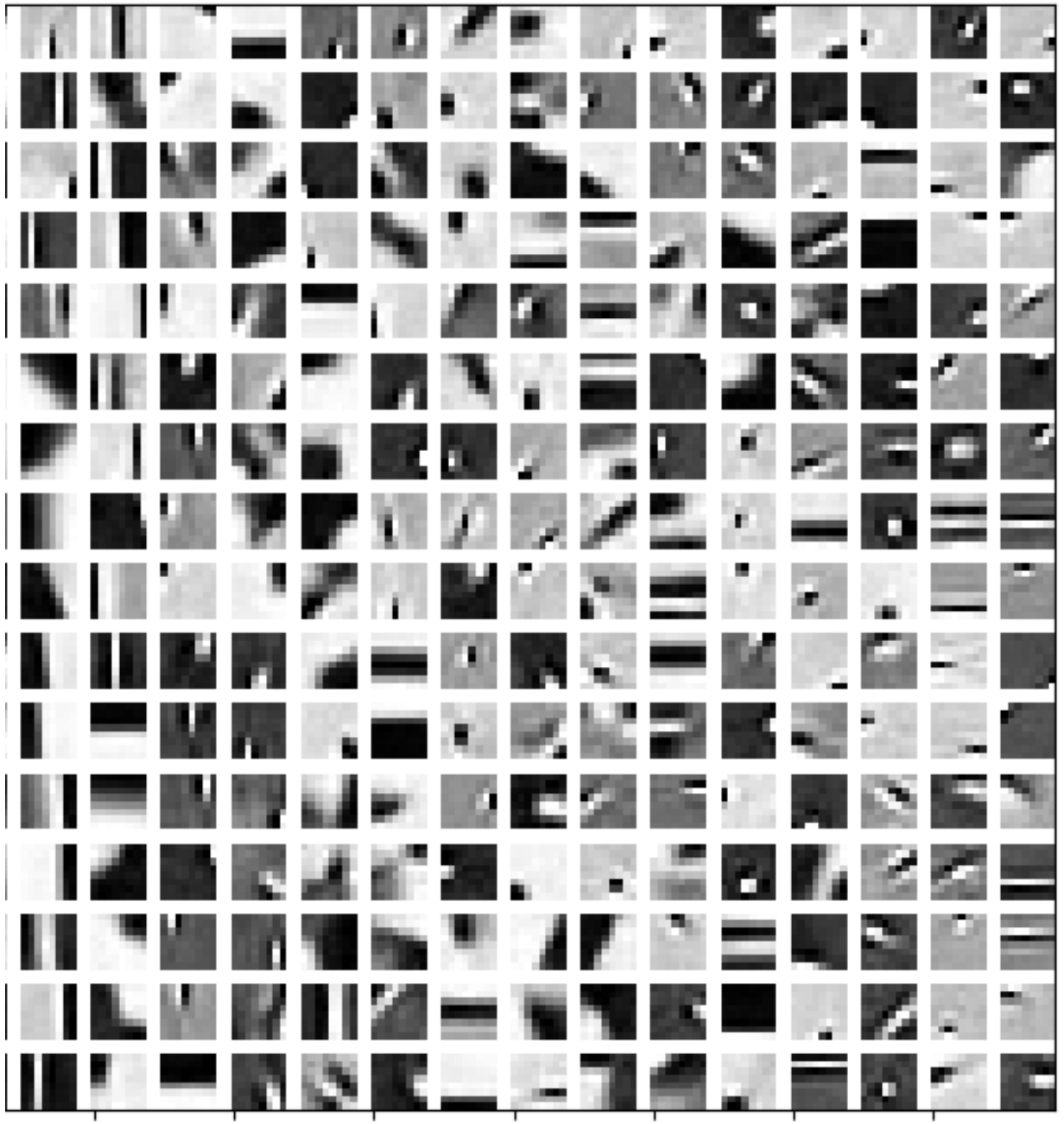
Assignment

Denoising via Sparse Coding

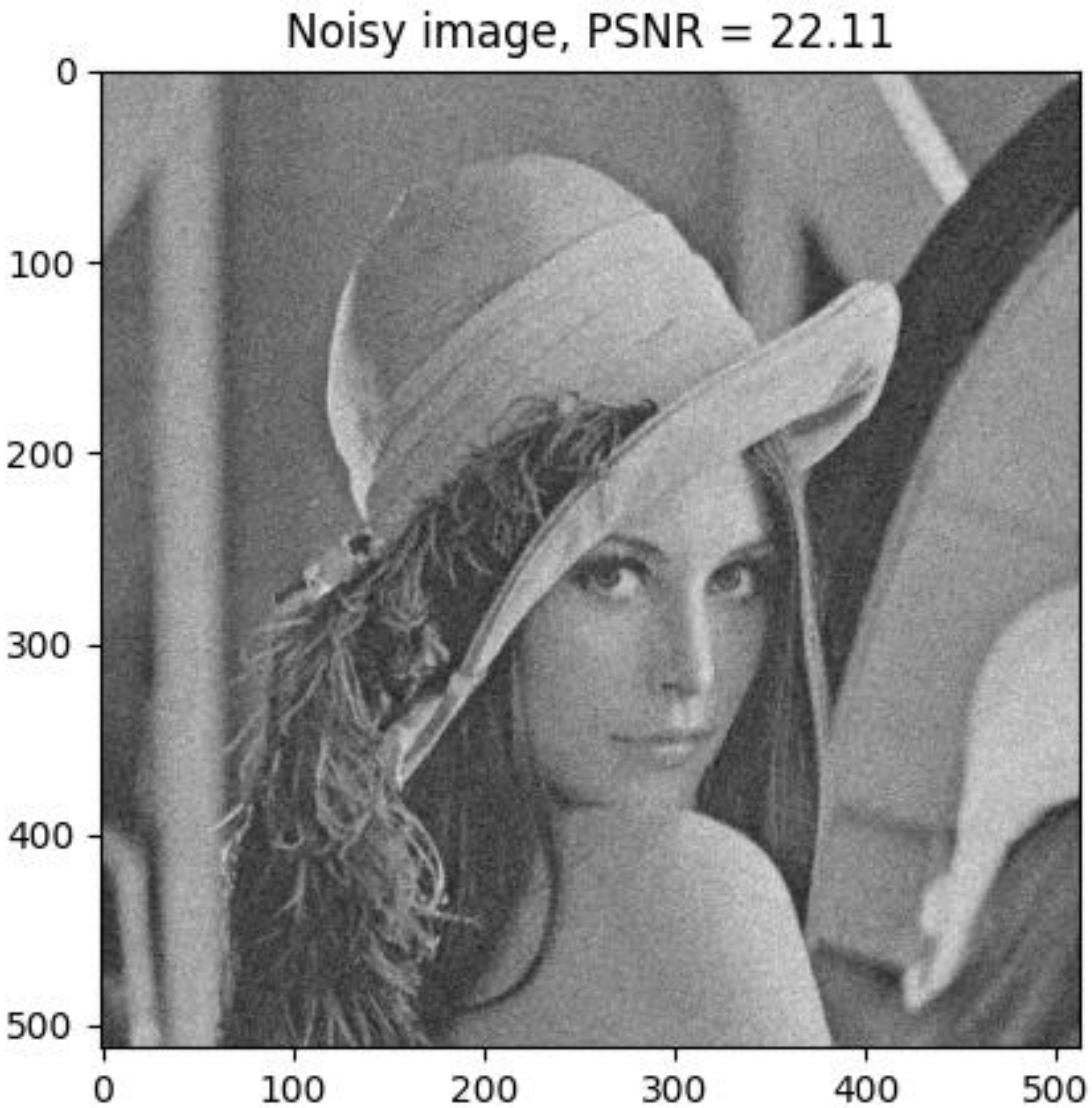
Take the setup of Assignment 3 (denoising via DCT)

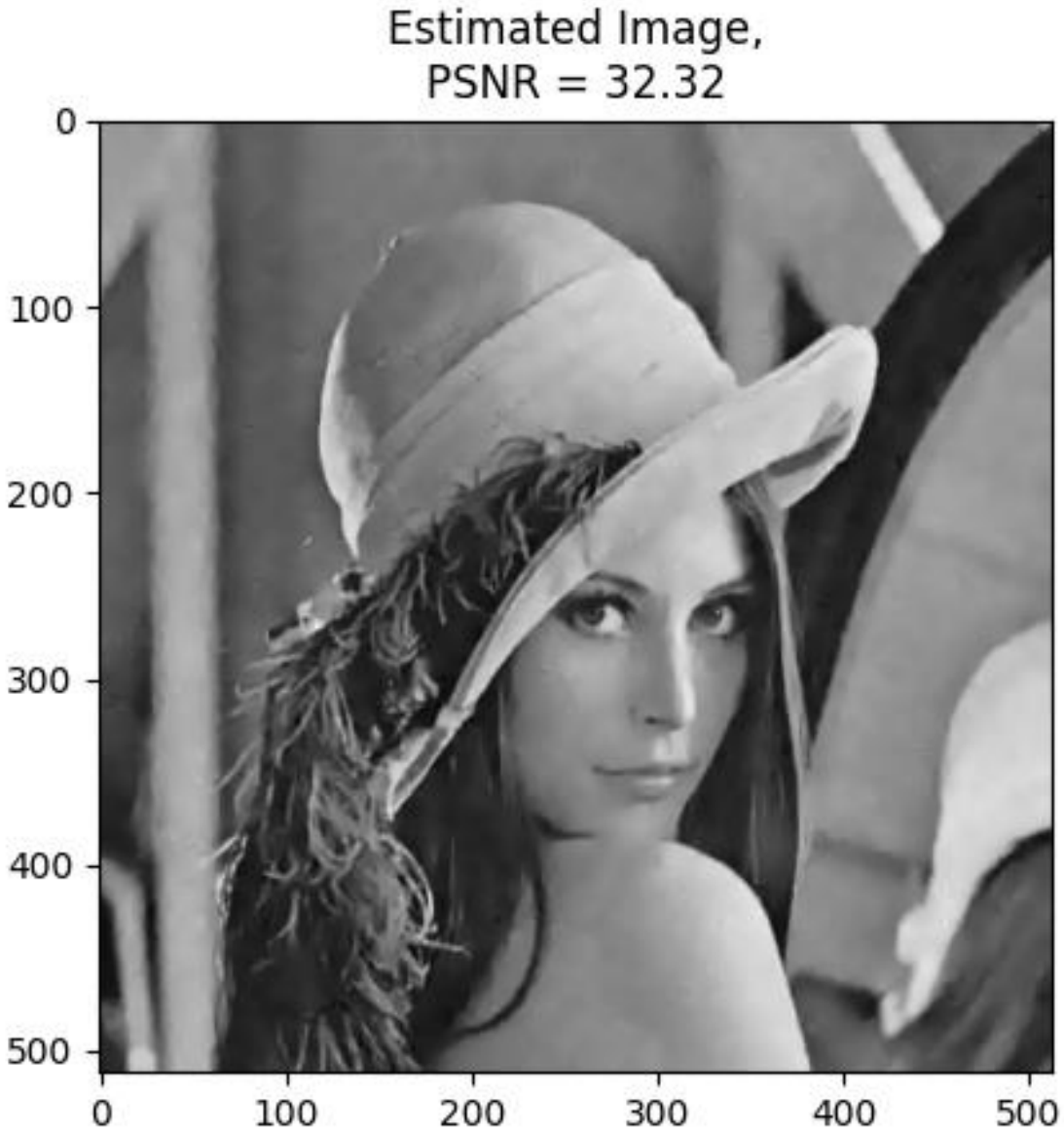
- Load the dictionary provided (learned from natural images)
- Replace the analisys and the thresholding with the sparse coding using a MP variant (start with OMP)
- Perform the synthesys and reconstruct the images
- Sparse Coding is much more demanding than analisys + thresholding. Take a step > 1 to reduce the computation

The Dictionary



The estimated image





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