Assignment 3.2

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(a)

Noise Level for Real and Imaginary components
Real Noise Level (found from pixels in imageNoisy(1:50, 1:50)) : 0.060861
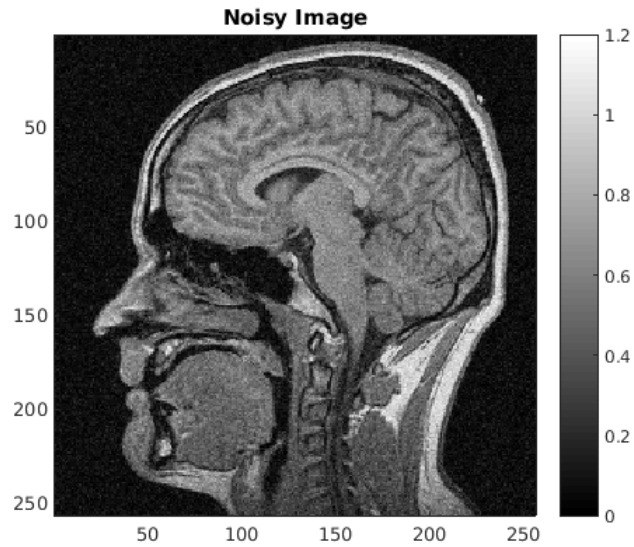Imaginary Noise Level (found from pixels in imageNoisy(1:50, 1:50)) : 0.058865

(b)

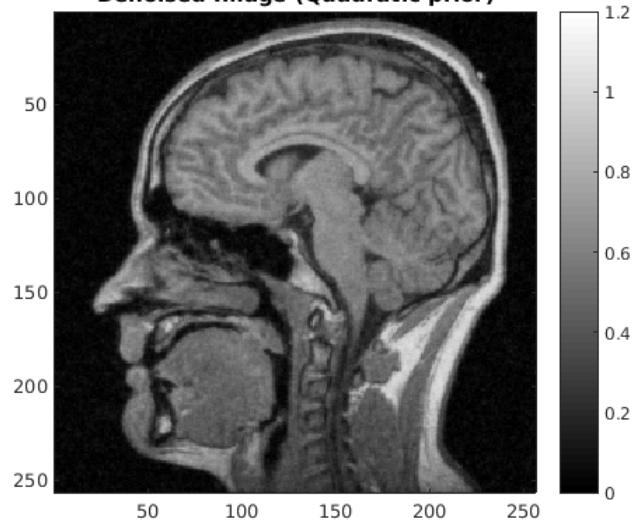Optimal Values of parameters :
Quadratic Prior : $\alpha = 0.8$
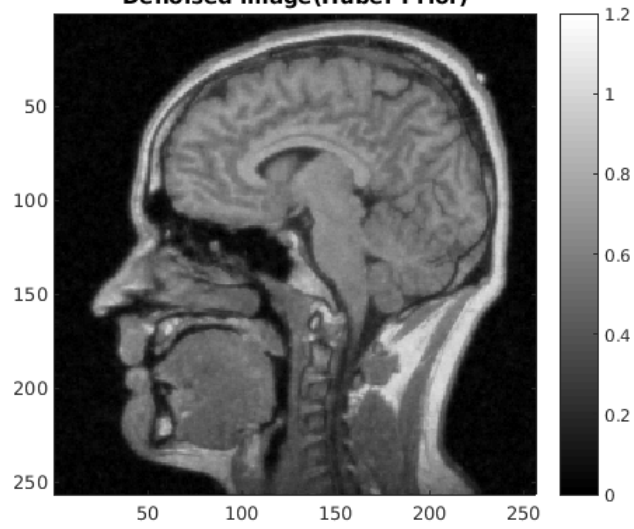Huber Prior : $\alpha = 0.503, \gamma = 0.0424$
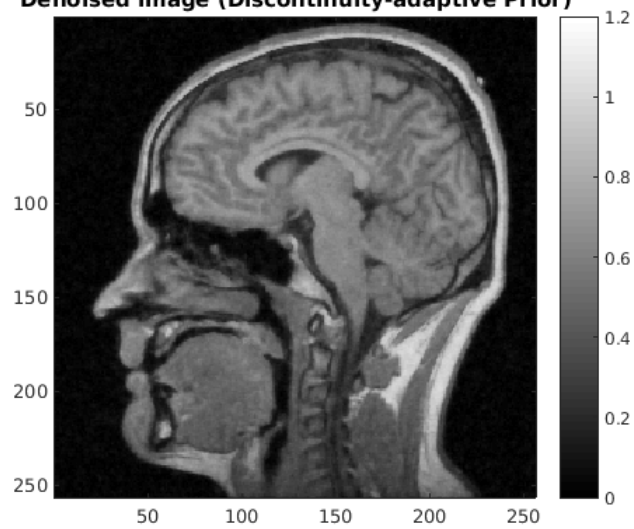Discontinuity-adaptive prior : $\alpha = 0.5, \gamma = 0.23$

Denoised Image (Quadratic prior)

Denoised image(Huber Prior)

Denoised image (Discontinuity-adaptive Prior)

(c)

Objective Function vs Iteration(Quadratic Prior)

Objective Function vs Iteration(Huber Prior)

Objective Function vs Iteration(Discontinuity-adaptive Prior)