In the name of God, the Merciful, the Compassionate

Intelligent Analysis of Biomedical Images CE-571
Computer Engineering Department
Sharif University of Technology
Fall 2020
Homework 1
Deadline: 7th of Aban 1399, 13:00

Download the BrainWeb dataset that includes T1, T2, and PD images, with slice thickness of 1mm, 0% noise, and intensity non-uniformity of 0% from the following link. In addition, download the noisy version of this dataset, with the same slice thickness and 9% noise and non-uniformity of 40% from the same link.

a) Survey two state-of-the-art methods in MRI image denoising. Give details of the methods and compare them.
b) Apply the mentioned methods for image denoising on the BrainWeb dataset and report the quality of denoising through SNR.

You should write a report of your work that presents a table of SNRs and some representative denoised images along with the noisy version. You should also upload your codes.