# EEE5502 Foundations of Digital Signal Processing Code 7

Hudanyun Sheng

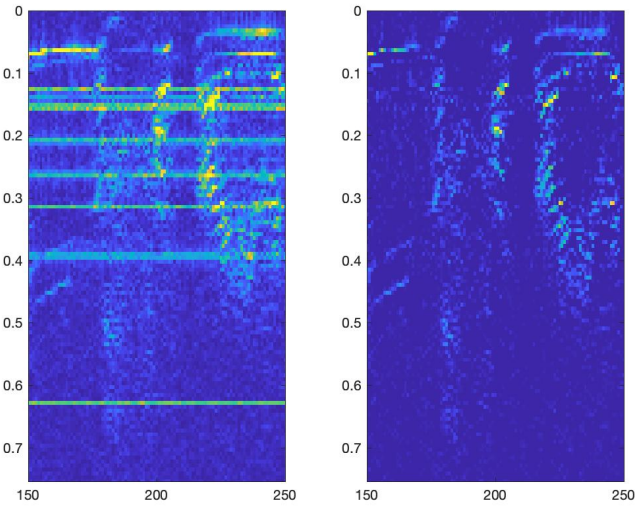
## Question #1:

I spent 2 hours.

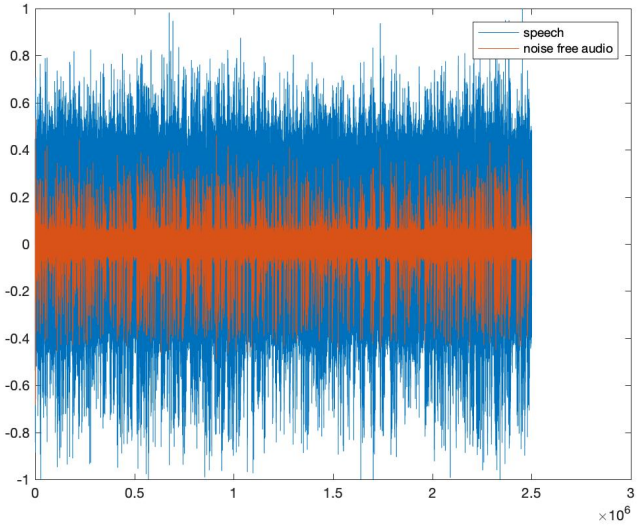
## Question #2:

I add another variable $\lambda$ as an input to the function "sift_func.mat", and the window size $W$ is set to be 1000, $\lambda$ is set to be 0.9.

The image of the STFT before and after the spectral subtraction processing is shown below, we can observe that before spectral subtraction processing, there is a lot noise, the spectral subtraction processing gets rid of them.




The original speech and the reconstructed noise-free audio is shown in the plot below:


speech
noise free audio
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
0
0.5
1
1.5
2
2.5
3
×10^6