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ECE 425

Homework 6

**Frequency 8000**

Error Sequence = 2.7545e-05

Relative Error = 1.0517

File Names

Original - voiceOrig44100Hz.wav

Corrupted - voiceCurrupt44100Hz.wav

Filtered - voiceFiltered44100Hz.wav

**Frequency 44100**

Error Sequence = 7.2634e-05

Relative Error = 0.4415

File Names

Original - voiceOrig44100Hz.wav

Corrupted - voiceCurrupt44100Hz.wav

Filtered - voiceFiltered44100Hz.wav

For this program we had to use MATLAB to record our voice at a given frequency. Then we had to corrupt this voice recording and then filter it using our 12 stage moving filter. The frequency rates we used for our sampling frequency was 8000, and 44100. These frequency rates are how many times MATLAB grabs data points for the given recorded voice per second. Once we record our voice for two second we then use a random variable to corrupt the sounds. After the corruption we use a 12 stage moving filter to try and remove our bad points. The was this filter works is by averaging the points while it moves through the array. As we can see by looking at our data above frequency 44100 gives us better results. This can be noticed in our relative error. This is because of the point that is made above. The 44100 has more points which is grabs since this the filter is able to create a substantially better average and cancel out our bad points we created.