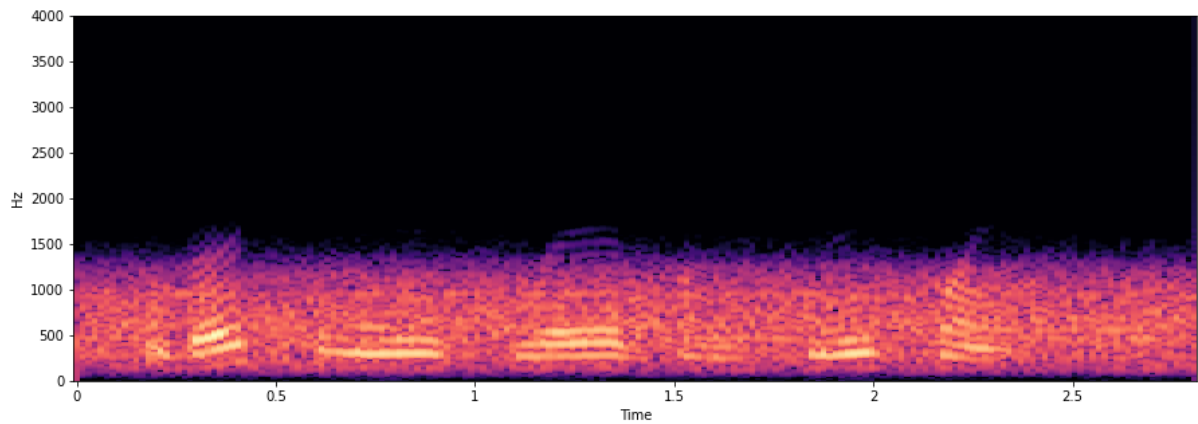


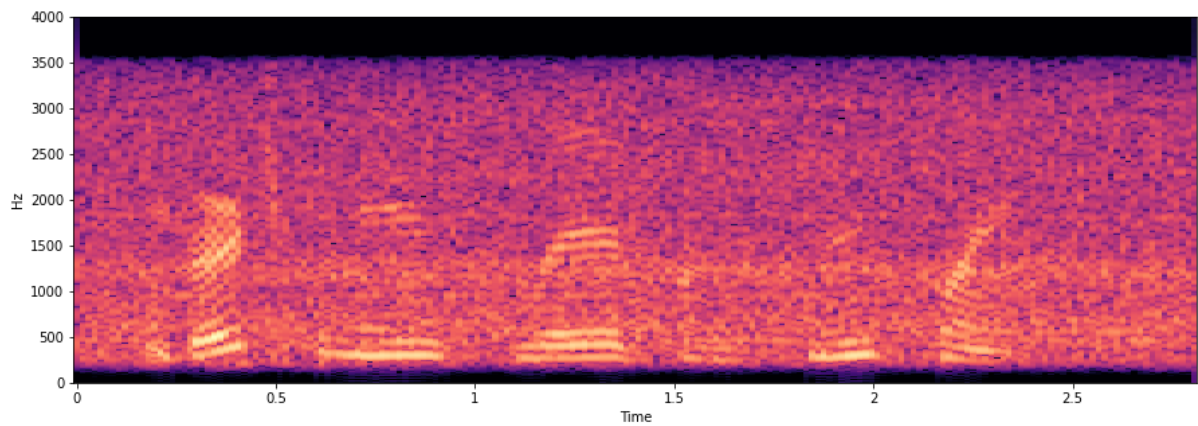
SIT 789

Task 7.2: Speech enhancement

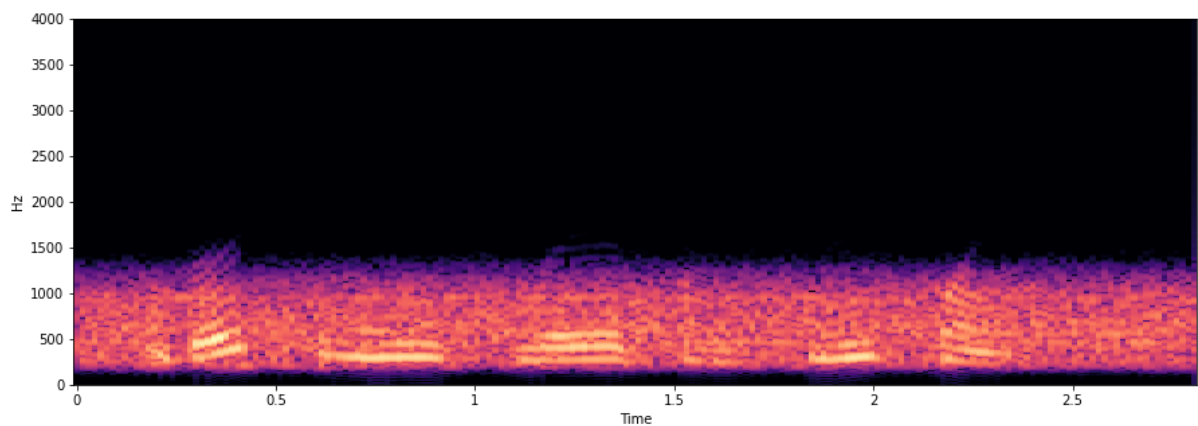
Task 1.1: Low pass filter



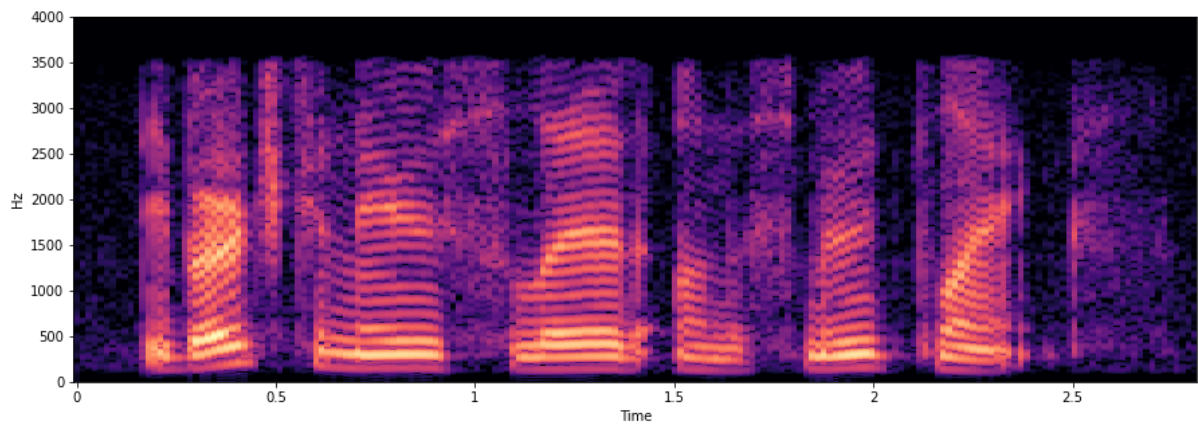
Task 1.2: High pass filter



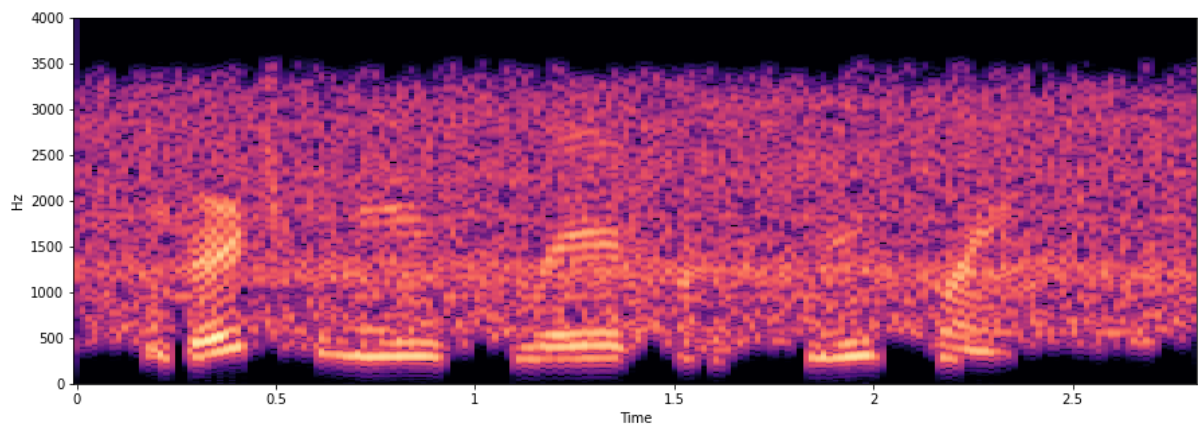
Task 1.3: Band pass filter



Task 2.1: Clean signal spectrogram



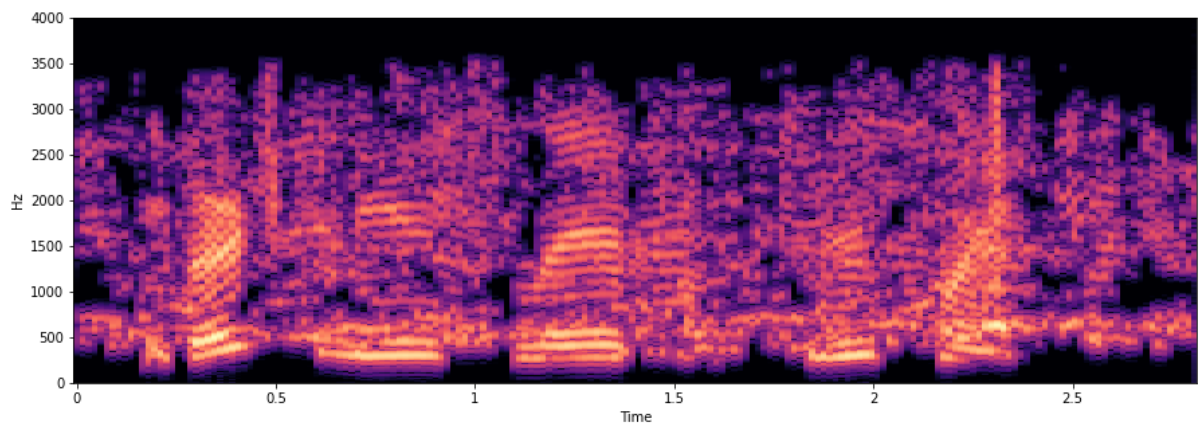
Spectral subtraction algorithm spectrogram



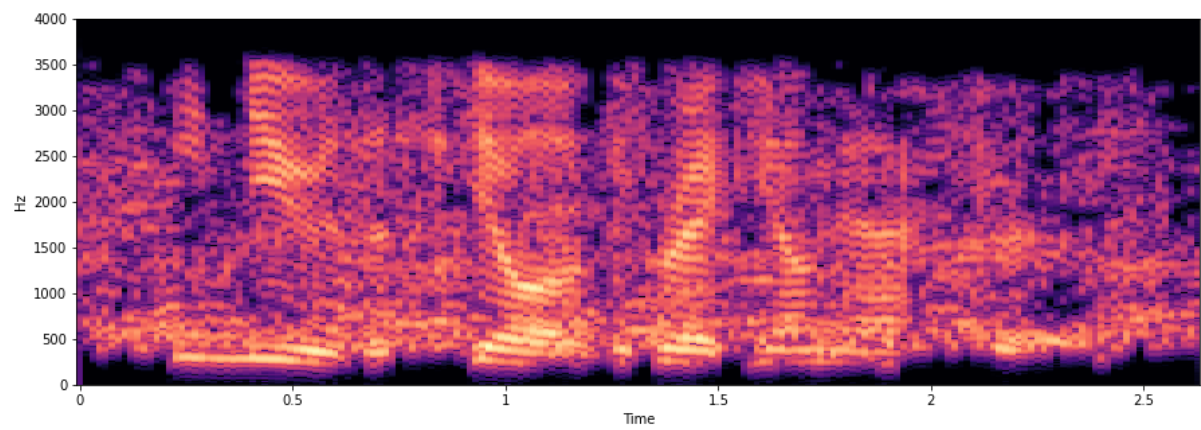
We can observe that the spectral subtraction algorithm removes a bit of noise, but the signals still have some noise as compared to the clean audio. This can be attributed to the fact that noise and noisy signals are sourced from different data sources, if the source is same the algorithm should eliminate the noise significantly.

Output for some supplied speech signals:

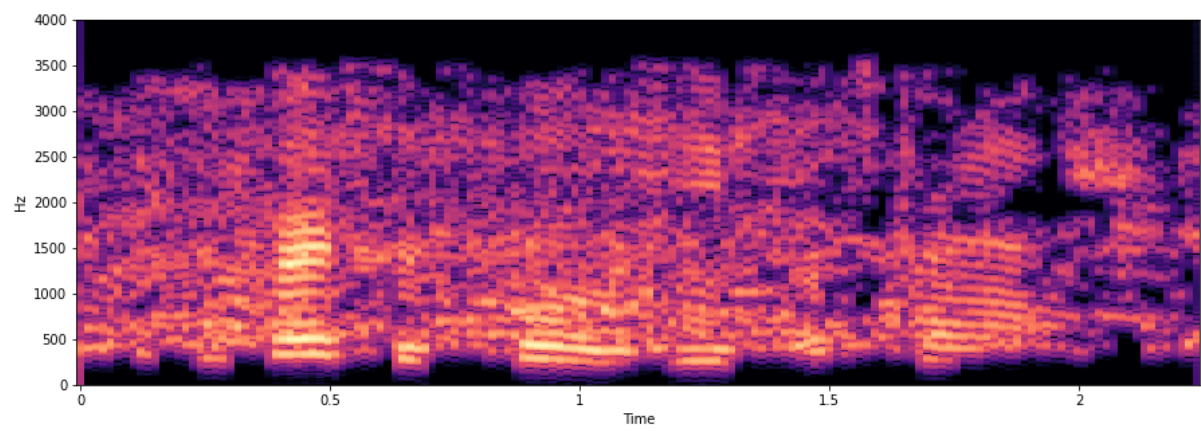
sp01_babble_sn5.wav



sp02_babble_sn5.wav



sp03_babble_sn5.wav



sp03_station_sn5.wav

