

Assignment 2

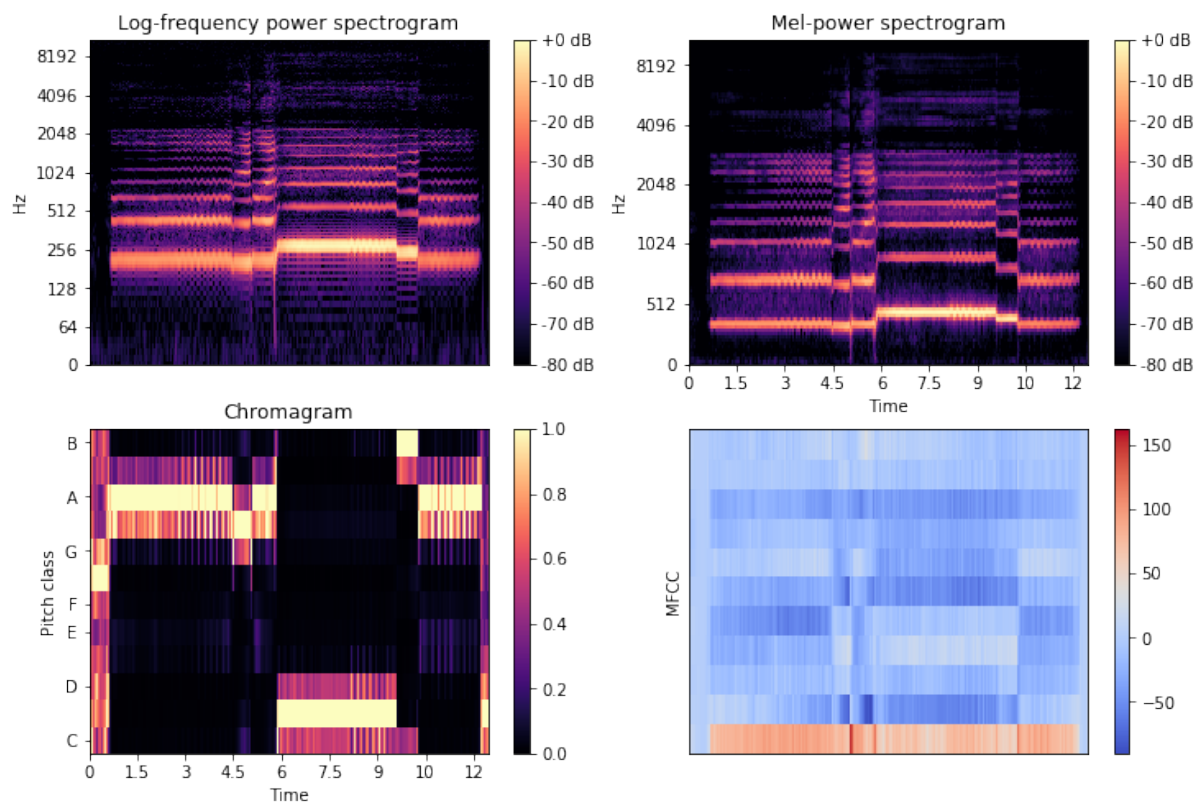
Due Monday October 15th by 11:59pm

1. Read this chapter on pitch perception (focusing on the first nine sections)
de Cheveigné, A. 2005. Pitch perception models. In *Pitch: Neural Coding and Perception*, ed. C. J. Plack, A. J. Oxenham, R. R. Fay and N. A. Popper, 169–233. New York, NY: Springer.

And write up a short summary (~ 1 paragraph for each point) on

- i. the definition of pitch
- ii. place theory (with a brief synopsis of its history and its relationship to signal processing methods)
- iii. time theory (with a brief synopsis of its history and its relationship to signal processing methods)

2. Create a jupyter notebook to generate the following plot



Using the following settings:

Log-frequency spectrogram: `n_fft=2048, hop_length=32, win_length=1024`

Colorbar format='%+2.0f dB'

Mel-power spectrogram: `n_fft=2048, n_mels=128`. Colorbar - format='%+2.0f dB'

Chromagram – default values

MFCCs – 13 coefficients, run on log spectrogram