FEATURES EXTRACTION

Blind to all the things 🡪 Aim: doing as much features as possible

# Methods

## Features on Power Spectrum

**meanPSD -** The average frequency calculated as the sum of product of the power spectrum and the frequency divided by the total sum of the power spectrum.

**stdPSD -** The deviation of the spectrum frequencies from the mean frequency

**medPSD -** The frequency which separates higher half of the spectral power from the lower half

**bw -** The difference between the upper frequency where the power is 3 dB lower maximum and the lower frequency where response is 3 dB lower

**p25 -** The frequency below which a quarter of the spectral power lies

**p75 -** The frequency below which three quarter of the spectral power lies

**IQR -** Interquartile range, i.e. Tthe frequency range between p25 and p75

**TP -** Total power in the 100-1000 Hz range

**p100-200 -** Power in the 100-200 Hz range divided by TP

**p200-400 -** Power in the 200-400 Hz range divided by TP

**p400-800 -** Power in the 400-800 Hz range divided by TP

**p800-1200 -** Power in the 800-1200 Hz range divided by TP

**spectrum-slope -**The rate at which the sound spectrum power tails off or decreases from mean frequency to higher frequencies. The value represents the gradient of the linear regression line fitted to the power in logarithmic octave scale

**r-square2 -** Statistical measure of how close the data is to the fitted regression line

## Power Spectrum Fit

## MFCC Coefficients

## LPC Coefficients

# Results