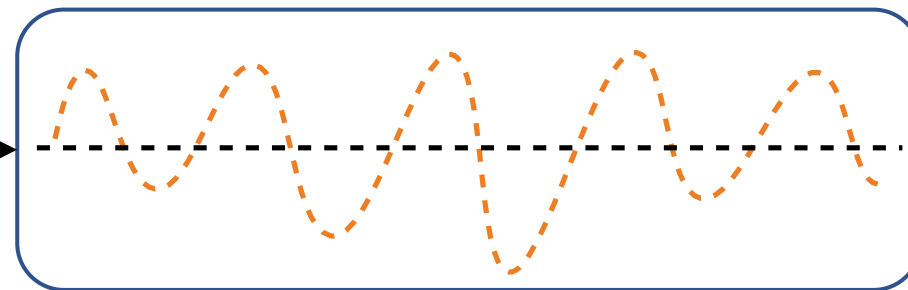


a) Entire cough wave file

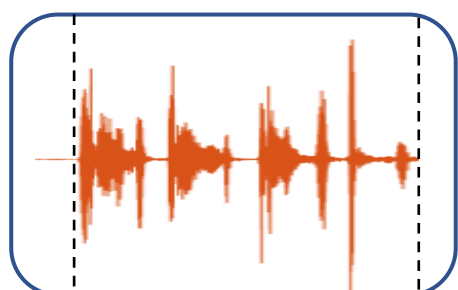


b) 128 samples comprising one frame of signal

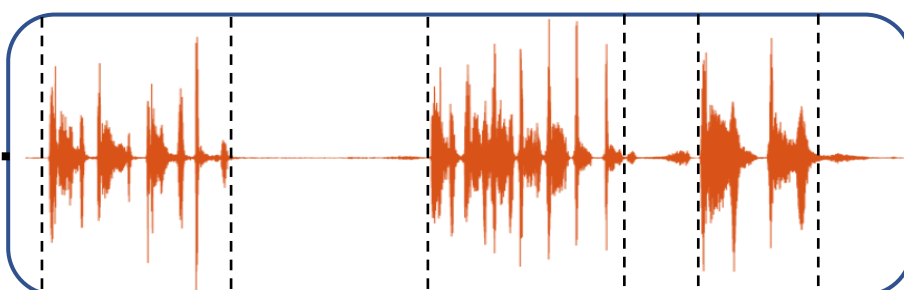


$$\sqrt{\sum \frac{(\bar{x} - x_1)^2}{n - l}}$$

c) Standard derivation of the signal within the frame is calculated using a moving window



e) First portion :  
Each portion of signal is then analyzed in sequence whilst remaining areas of no sound are ignored from further analysis



d) Portions of signal found with a variance from the baseline above the standard set level are identified