

Pseudocode:

- 1) Read the csv file
- 2) set the first row as the reference signal
- 3) set min = 20, max = 80
- 4) set min_MSE = MSE of reference signal
 calculate MSE of other signals
 if MSE is smaller than min_MSE then set that as min_MSE
 set that as best match signal
- 5) Now calculate the shifts of all signal by finding intensity in range of 0.3 to 0.7
- 6) Find average End Expiration by sorting shifts and taking avg of smallest 20%
- 7) Finding End Expiration window by selecting shifts which are within ± 5 mm to avg End Expiration
- 8) Giving these measurement as flag = 1 and to rest measurement, a flag = 0
 also assign their shift value
- 9) write these in a text file
- 10) Plot average shift during the end-expiration window, the number of measurements acquired within the end-expiration window