Matlab versus Python WavPDS denoising comparison :

1. **Main Matlab lines used:**

[C,S] = wavedec(data,N,wavename)

D = detcoef(C,S,wavename,N)

A\_N = appcoef(C,S,wavename,N)

**For each decomposition level i:**

(ai is the threshold)

D\_coef(1,ai) = 0

C\_denoised =[A

D\_coef{1,i}

….]

1. **Main Python lines used:**

Coeff = wavedec(data, wavename,N)

**For each decomposition level i:**

C\_denoised = apply\_detail\_thresholding(coeffs2, level = i, threshold[-i])

Thresholds = [thresholds\_level8, thresholds\_level7,…, thresholds\_level1]

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| Matlab functions | Python functions |
| wavedec(data,level=N,wavename) | wavedec(data, wavelet, mode='symmetric', level=N) |
| ai | Thresholds[-i] |
| waverec(coeff,level=N,wavename) | waverec(denoised\_coeffs, wavename) |

Matlab waverec : Note: x = waverec(c,l,wname) is equivalent to x = appcoef(c,l,wname,0).