DETAILS ON THE EEG DATASET TAKEN FROM

https://github.com/ncclabsustech/EEGdenoiseNet/tree/master

Based on the paper [1]

1. EEGDATASET.mat contains 4514 clean EEG epochs of a signal sampled at 256 Hz (each segment/epoch has 512 samples and therefore is of 2 seconds). It is a matrix of dimensions (4514 x 512).

2. EMGDATASET.mat contains 5598 EMG epochs sampled at 256 Hz. It is a matrix of dimensions (5598 x 512). This can be used to add noise to the clean EEG signals.

3. EOGDATASET.mat contains 3400 EOG epochs sampled at 256 Hz. It is a matrix of dimensions (3400 x 512). This can be used to add noise to the clean EEG signals.

Noise can be added using the following equation as given in [1]:

y(t) = x(t) + λn(t)

where y(t) is the noise corrupted signal

x(t) is the clean signal from EEGDATASET.mat

λ is a parameter which determines the extent of noise contamination in the signal to maintain the SNR

n(t) is the EMG or EOG signal from the corresponding datasets.

[1] “EEGdenoiseNet: A benchmark dataset for end-to-end deep learning solutions of EEG denoising”