23-06-2020

Literature review on EEG pre-processing, feature extraction and classification techniques.

<https://www.researchgate.net/profile/Mohamed_Dessouky/publication/338119172_Literature_Review_on_EEG_Preprocessing_Feature_Extraction_and_Classifications_Techniques/links/5e0ccb4c4585159aa4ab4638/Literature-Review-on-EEG-Preprocessing-Feature-Extraction-and-Classifications-Techniques.pdf>

@article{shoka2019literature,

title={Literature Review on EEG Preprocessing, Feature Extraction, and Classifications Techniques},

author={Shoka, Athar and Dessouky, Mohamed and El-Sherbeny, Ahmed and El-Sayed, Ayman},

journal={Menoufia J. Electron. Eng. Res},

volume={28},

pages={292--299},

year={2019}

}

Detecting sleep spindles in EEGs using wavelet Fourier analysis and statistical features

<https://www.sciencedirect.com/science/article/pii/S1746809418302672?casa_token=9UA6IWRSAc0AAAAA:r6TE-AxspCdqAFXzOGuGxLLcT1YtC0WR6g27Rone74UnJalHI2hZUU-8V4_-X7mJncfkgJj2>

@article{al2019detecting,

title={Detecting sleep spindles in EEGs using wavelet fourier analysis and statistical features},

author={Al-Salman, Wessam and Li, Yan and Wen, Peng},

journal={Biomedical Signal Processing and Control},

volume={48},

pages={80--92},

year={2019},

publisher={Elsevier}

}

A review of feature extraction and performance evaluation in epileptic seizure detection using EEG

<https://www.sciencedirect.com/science/article/pii/S1746809419302836?casa_token=grAki5ZUoOwAAAAA:0Tf8kvjndaJfvMMOHCoO2f1IXkS5CQq0uyIKr28BF2hN_3cLQHKKCcntjPxuxUmtxoa8zyjg>

@article{boonyakitanont2020review,

title={A review of feature extraction and performance evaluation in epileptic seizure detection using EEG},

author={Boonyakitanont, Poomipat and Lek-Uthai, Apiwat and Chomtho, Krisnachai and Songsiri, Jitkomut},

journal={Biomedical Signal Processing and Control},

volume={57},

pages={101702},

year={2020},

publisher={Elsevier}

}

Improved Discrete Wavelet Analysis and Principle component analysis for EEG signal processing

<https://ieeexplore.ieee.org/abstract/document/8983523?casa_token=zCLw3a5n2AAAAAAA:OABdTQraUG1hdAjQNA7pWICB05PQtuuOgIVjpKatk7LK6plLZY_nXNZe5DzeCBfGv6CFMfwJiHc>

@inproceedings{chen2019improved,

title={Improved Discrete Wavelet Analysis and Principal Component Analysis for EEG Signal Processing},

author={Chen, YiHsiang and Cui, Xiaoxin and Xiao, Kanglin and Yu, Dunshan},

booktitle={2019 IEEE 13th International Conference on ASIC (ASICON)},

pages={1--4},

year={2019},

organization={IEEE}

}

Of the different types of data at the moment, I am looking at an image recognition response.

Maybe try the surf representation 3d

Cwt – continuous wavelet transform

Dwt – discreet wavelet transform

Check the differences here – see which ones are applicable in which scenarios.

Try to tune the frame size of the data – move through the data

Change the parameter to see if data exists – wavelet parameters – sampling rate – short time fourier

Put plots together on a PowerPoint and some reference to what it is showing – for tryphon

Have a look at exsiting software if that exists

Matlab toolbox – adaptive wavelet – discrete wavelet

Check outlook