

BM4152 Biosignal Processing Paper Implementation

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1. Introduction and Background

1.1 Introduction and Background

2. Overview of Selected Paper/Dataset

2.1 Overview of Selected Paper/Dataset

3. Methods Description

3.1 Methods Description

4. Implementation Details (along with challenges faced)

4.1 Implementation Details (along with challenges faced)

5. Implementation Results (and comparison with results in the paper if suitable)

5.1 Implementation Results (and comparison with results in the paper if suitable)

Table 5.1: Wavelet Feature Classification Accuracy and Computation Time - PNN

Wavelet	Feature	Seizure-Free CA (%)	Epileptic CA (%)	CT (s)
db2	energy	100.0	96.0	0.022 755
db2	std	99.0	96.0	0.022 401
db2	entropy	95.0	93.0	0.022 820
db2	energy_std	100.0	96.0	0.024 049
haar	energy	100.0	95.0	0.022 497
haar	std	99.0	95.0	0.022 490
haar	entropy	97.0	94.0	0.022 393
haar	energy_std	100.0	95.0	0.023 468
coif1	energy	100.0	97.0	0.022 414
coif1	std	100.0	97.0	0.022 316
coif1	entropy	98.0	95.0	0.022 542
coif1	energy_std	100.0	97.0	0.024 299
bior1.1	energy	100.0	95.0	0.025 277
bior1.1	std	99.0	95.0	0.023 129
bior1.1	entropy	97.0	94.0	0.021 883
bior1.1	energy_std	100.0	95.0	0.021 977

Table 5.2: Wavelet Feature Classification Accuracy and Computation Time - SVM

Wavelet	Feature	Seizure-Free CA (%)	Epileptic CA (%)	CT (s)
db2	energy	99.0	96.0	0.001 965
db2	std	99.0	96.0	0.002 267
db2	entropy	91.0	96.0	0.001 377
db2	energy_std	99.0	96.0	0.001 861
haar	energy	100.0	96.0	0.001 533
haar	std	98.0	96.0	0.001 254
haar	entropy	91.0	97.0	0.001 820
haar	energy_std	100.0	95.0	0.001 014
coif1	energy	100.0	96.0	0.001 922
coif1	std	99.0	94.0	0.001 244
coif1	entropy	90.0	95.0	0.001 726
coif1	energy_std	100.0	96.0	0.001 533
bior1.1	energy	100.0	96.0	0.001 362
bior1.1	std	98.0	96.0	0.001 847
bior1.1	entropy	91.0	97.0	0.001 859
bior1.1	energy_std	100.0	95.0	0.002 045

6. Conclusion and Possible Improvements

6.1 Conclusion and Possible Improvements