EEG dataset (73 subjects)
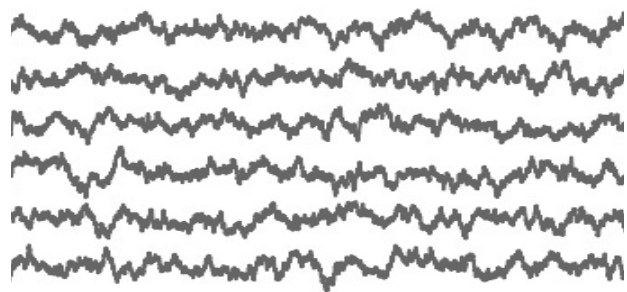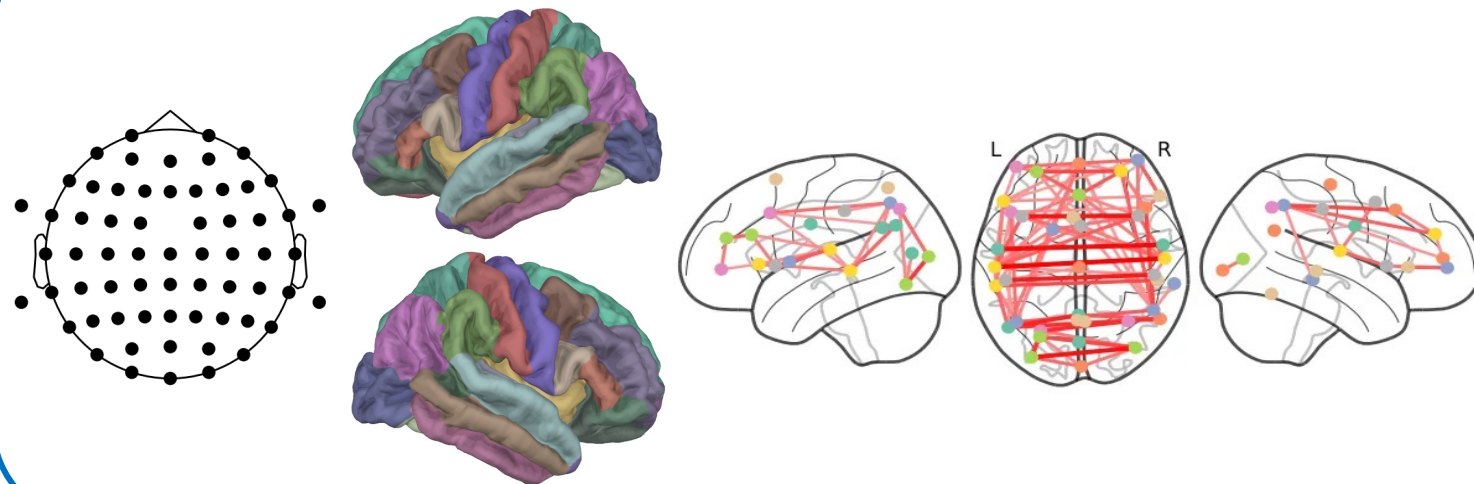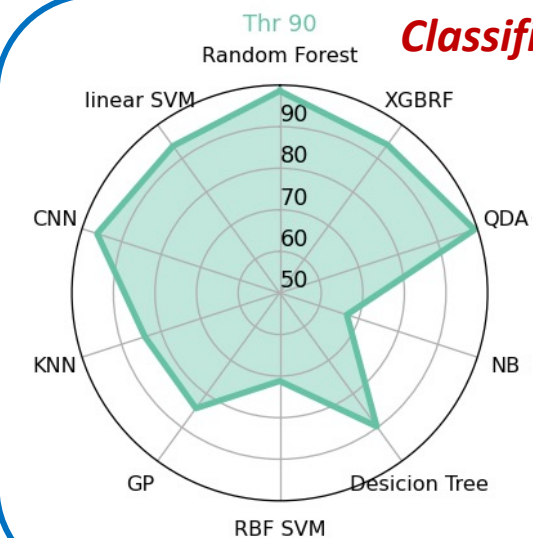
35 (47.9%) subjects with +BATS
38 (52.1%) subjects with -BATS

Feature extraction in sensor and source spaces

Classification

Thr 90

Random Forest
XGBRF
QDA
NB
Desicion Tree
RBF SVM
GP
KNN
CNN
linear SVM

90
80
70
60
50

Classifiers list

1. Random Forest
2. XGBRF
3. Quadratic discriminant analysis
4. Naive Bayes
5. Decision Tree
6. RBF SVM
7. Gaussian process
8. KNN
9. CNN
10. Linear SVM

Model interpretation (sensor space, source space, connectivity)

Gamma power
Alpha power
Beta power
Gamma entropy
Aperiodic slope
Aperiodic offset
Alpha entropy
Theta power
Beta entropy
Delta power
Theta entropy
Delta entropy

- BATS
+ BATS

0   0.15   0.3

SHAP value (average impact on model output magnitude)

High

Low

feature value

-0.3   0   0.3

SHAP value (impact on model output)

SP
PRC
SF
TT
INS
PC
PCC
SF
RAC
TP
PH

α

L   R

VAN
AUN
SMN
VSN
LBN
DGN
DMN
FPN
DAN