**Feature names**

Column 1 to 3 = Information related to the dataset, which is not required for the ML implementation.

Column 4 = Label (1 represents Task related thoughts, 2 represents Task unrelated thoughts)

Column 5 = Frontal P3 mean

Column 6 = Frontal P3 STD

Column 7 = Posterior P3 mean

Column 8 = Posterior P3 STD

Column 9 = Frontal alpha mean

Column 10 = Posterior alpha mean

Column 11 = Alpha variability

Column 12 = Reaction time Mean

Column 13 = Reaction time variability

Column 14 = Accuracy

Column 15 = Frontal P3 log energy entropy

Column 16 = Frontal P3 Shannon entropy

Column 17 = Frontal P3 SURE entropy

Column 18 = Frontal P3 Skewness

Column 19 = Frontal P3 Kurtosis

Column 20 = Frontal alpha log energy entropy

Column 21 = Frontal alpha Shannon entropy

Column 22 = Frontal alpha SURE entropy

Column 23 = Frontal alpha Skewness

Column 24 = Frontal alpha Kurtosis

Column 25 = Posterior P3 log energy entropy

Column 26 = Posterior P3 Shannon entropy

Column 27 = Posterior P3 SURE entropy

Column 28 = Posterior P3 Skewness

Column 29 = Posterior P3 Kurtosis

Column 30 = Posterior alpha log energy entropy

Column 31 = Posterior alpha Shannon entropy

Column 32 = Posterior alpha SURE entropy

Column 33 = Posterior alpha Skewness

Column 34 = Posterior alpha Kurtosis