

# Supplementary Information - Parameters of Regression Models

The parameters of regression models were uploaded at Figshare.com as MATLAB \*.mat files.

## Download the Regression Model MAT-Files (\*.mat)

1. URL to download the model parameter files: <https://figshare.com/s/a93b79d0b35e054810d8>
2. Three regression model files (\*.mat) are “mdl\_FTP.mat (22.48 kB)”, “mdl\_FAA.mat(5.51 kB)”, and “mdl\_FLBP.mat (6.18 kB)”. These files are freely downloadable.

## Dependencies

1. Higher version of Matlab R2016b: <https://mathworks.com/>
2. Statistics and Machine Learning Toolbox: <https://www.mathworks.com/products/statistics.html>

## Loading the Regression Models MAT-Files in Matlab

1. Make sure that the Regression Model Mat-Files are in the current path in Matlab
2. Load a Regression MAT-File by using the Matlab function, “load”, as follows:

```
load('mdl_FAA.mat');
```

## Predict the IQR of the EEG features

1. Recording resting EEG (RS-EEG) and prepare the following RS-EEG predictors:

A. RS-EEG-Predictors for the prediction of the IQR of FAA

- [IQR-Asym-Alpha-10-12, IQR-Asym-Alpha-8-9]

B. RS-EEG-Predictors for the prediction of the IQR of FTP

- [IQR-Rel-Fp12-Theta-4-8Hz]

C. RS-EEG-Predictors for the prediction of the IQR of FLBP

- [IQR-Abs-Fp12-Beta-15-18, IQR-Abs-Fp12-Beta-12-15, IQR-Rel-Fp2-Beta-12-15]

2. Predict the IQR of EEG features using the Matlab function, “predict”, as follows:

```
Pred_IQR = predict mdlSelectedTest, [0.428687343204822, 0.442510355647657]);
```

**Table. Hyperparameters that used to Train the Regression Models**

IQR of EEG features	The regression models	Parameters
FAA	SVMR	$C = 0.1594$ , $\varepsilon = 0.0159$ , and $\delta = 1.0914$
rFTP	ebTR	The total number of learning cycles = 22, max number of splits = 1, minimum number of leaf size = 4
rFLBP	SVMR	$C = 0.0299$ , $\varepsilon = 0.0029$ , and $\delta = 1.5813$

$C$ ,  $\varepsilon$ , and  $\delta$  represents penalty factor, insensitive loss coefficient, and width of the linear kernel function, respectively.