Deep Learning Human Mind for Automated Visual Classification

3 stages:

* EEG signals recorded.
* EEG features extraction
* Classification

Filters set up so that the recorded signal included the Beta and Gamma bands.  
They convey information about the cognitive processes involved in the visual perception.

Method:

* Learning visual stimuli EEG data using RNN
* CNN-based regression to map images to RNN-learned EEG-based features
* Combination of the above two to implement automated visual classifiers

Translating an input multichannel EEG sequence into a low dimensional feature vector summarizing the relevant content of the input sequence.

Use LSTM recurrent neural networks, capability to track long-term dependencies in the input data.

Feature extraction for object recognition in humans happens during the first 50-120ms.