Supplementary Information - Neural Correlates of Hypnosis: Insights from EEG-Based Machine Learning Models

Yeganeh Farahzadi[1, 2, *]**, Cameron Alldredge**[3]**, and Zoltán Kekecs**[2]

[1]Doctoral School of Psychology, ELTE Eötvös Loránd University, Budapest, 1064, Hungary
[2]Institute of Psychology, ELTE Eötvös Loránd University, Budapest, 1064, Hungary
[3]Department of Psychology and Neuroscience, Baylor University, Waco, TX76798, Texas, USA
[*]yeganeh.farahzadi@ppk.elte.hu

Text-Based Prediction of Hypnotic Depth

We trained a linear SVC to predict participants' hypnotic level (shallow vs. deep hypnosis) based on their free text reports to ensure numerical ratings are reliable measures of hypnosis depth. We used the "all-MiniLM-L6-v2" model from the embetter Python package to tokenize the text. On the validation set, the accuracy was 65%, significantly higher than the accuracy of the same model trained on the permuted data 1. The GroupShuffleSplit method was used to perform cross validation 200 times with 80% of the data used for training and 20% for validation.
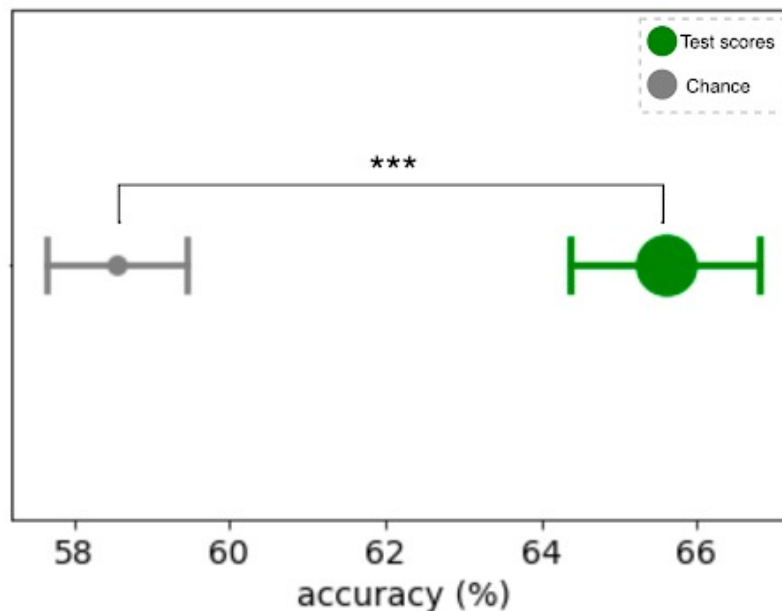

Figure 1. Deep vs. Shallow hypnosis classification as a function of embedded free text reports. The distribution of cross-validated out-of-sample prediction accuracy is displayed in green for the actual data and in gray for a shuffled version of the data (to form an empirical null distribution)