Multiclass motor imagery team

**Sum up of which point we are at**

* Explained that the problem of the paper we wanted to reimplement is that for Minimum Norm Estimate we need certain data and matrices that we do not have and we are not sure of how to obtain
* Vitaly found a paper in which they use neural networks to solve the inverse problem. We get a matrix showing the locations of brain’s activity and we can learn the source location.
* Benedetta showed the notes she took on the paper suggested by Vitaly. These notes include how to implement the technique
* We still need to understand what is Nonlinear Least Square Method (find the equation online, understand how the outputs of the neural network get used)

**What we discussed today**

* The data we retrieve is a linear combination of all the sources’ activities. So we might not need the whole source localization
* Use of Convolution Network to process the data recorded
* We will do supervised learning
* Ali, Sayan, Vitali meet on Wednesday evening to record set of data for a person
* Vitaly has some code for accuracy check

**What we do today**

* We split in two teams
* Sayan is going to use raw data (hence no source localization, just keep the linear combination), pass it to a convolution network which will output a one-hot vector (the vector is a 1D array, each location corresponds to a certain hand gesture done by either the left or right hand)
* Ali, Benedetta, Vitaly will try to implement the paper found by Vitaly, using the code skeleton written by Benedetta
* Both groups will use PyTorch to create and train the neural networks