Kaggle: Confused student EEG brainwave data

### Team Members

Peep Kolberg

Joonas Kriisk

Margus Reintam

Rain Vagel

### Initial plan

We will be using the demographic info and EEG data provided by the project on Kaggle. If necessary, we will also use the videos provided, but only when there is need for it as for our project plan, it is enough to just use the EEG data coupled with demographic info.

First, we might have to do some kind of data preprocessing or data analysis – like frequency analysis. Afterwards we will try to find correlation or causation in the data – which brain waves are most dominant during confusion and such. Furthermore, we would like to use some kind of machine learning algorithm – create a model that would be able to predict based on the data if the student was confused or not.

### Initial schedule

Week 1-2: Data preprocessing and setting initial pipelines for further analysis and development of methods

Week 2-4: Finishing and submission of checkpoint 3, further research on task and finding of causation, correlation

Week 4-8: Creation and application of machine learning algorithms, drawing conclusion from the findings and starting the writing of the final report

Week 8-10: Finishing touches on the project and final report

### Work Distribution

Main pieces of our project:

Data preprocessing

Data analysis

Machine learning algorithms (classification)

Data gathering (if we need more data, initial plan is that we do not need more data)

Peep will focus on research and data preprocessing.

Joonas will focus on machine learning algorithms and data preprocessing.

Margus will focus on research and data analysis.

Rain will focus on data analysis and machine learning algorithms.