

[23-winter vacation] Project : E-EaSY @ VCNL

project leader : Jeong, Jiyeon & Lee, Hansol

goal of project: We will learn about basic process of EEG signal processing together. This project incorporates from preprocessing based on 'matlab' to decoding EEG signal based on 'python'. Through this project, we hope you will be able to understand the papers including EEG method better and conduct the EEG signal analysis skillfully.

for this project: You need to come with your own laptop. The laptop should have the 'matlab' and 'python' installed. First two weeks will be worked on 'matlab', and the last two weeks will be worked on 'python'. Conducting analysis in python, if you use laptop based on Window system, we recommend you use Linux system by installing 'wsl'. Because the work in 'python' will be conducted using 'jupyter notebook', you should make basic ground for this work.

plans in each week

Week	Contents	Note.
1	[MATLAB] -install needed programs: brainstorm, fieldtrip -preprocess EEG signal, using brainstorm and 'matlab' script	Led by Jiyeon see Prof. Kang's instruction video
2	[MATLAB] -preprocess EEG signal, using fieldtrip -conduct time-lock analysis: P3 in signal collected conducting odd-ball task	Led by Jiyeon
3	[PYTHON] - install needed packages: MNE and other modules for decoding model -preprocessing EEG signal, using MNE module -compare overall performance of decoder according to model	Led by Hansol
4	[PYTHON] -conduct temporal decoding -conduct temporal generalization	Led by Hansol

Note. The above plan can be changed depending on the conditions at each time. The needed materials will be provided before meeting.