

EEG data using OpenBCI

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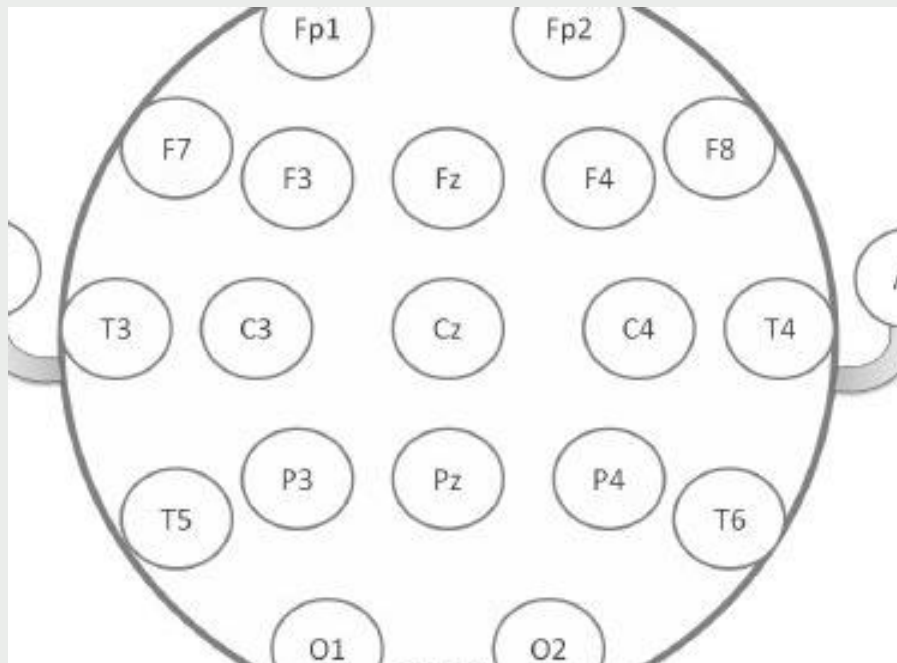
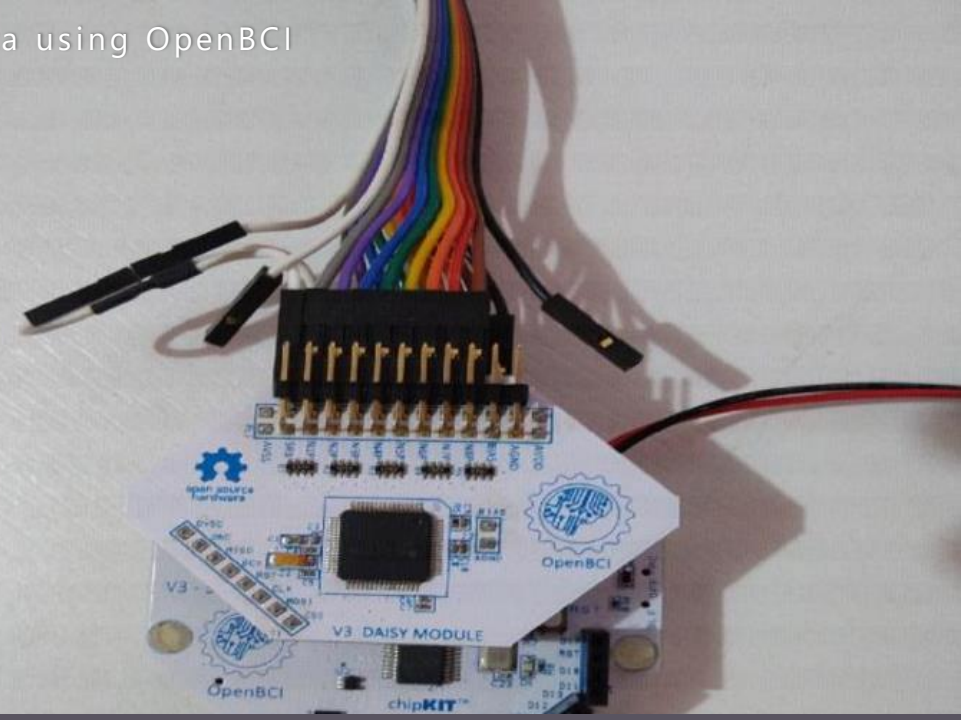
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Introduction



In this study, we want to investigate the influence of different reading mediums on reader attention and comprehension. Using a portable OpenBCI Cyton Biosensing board, we collect electroencephalogram (EEG) data from participants while they read short texts from both a print book and a smartphone.

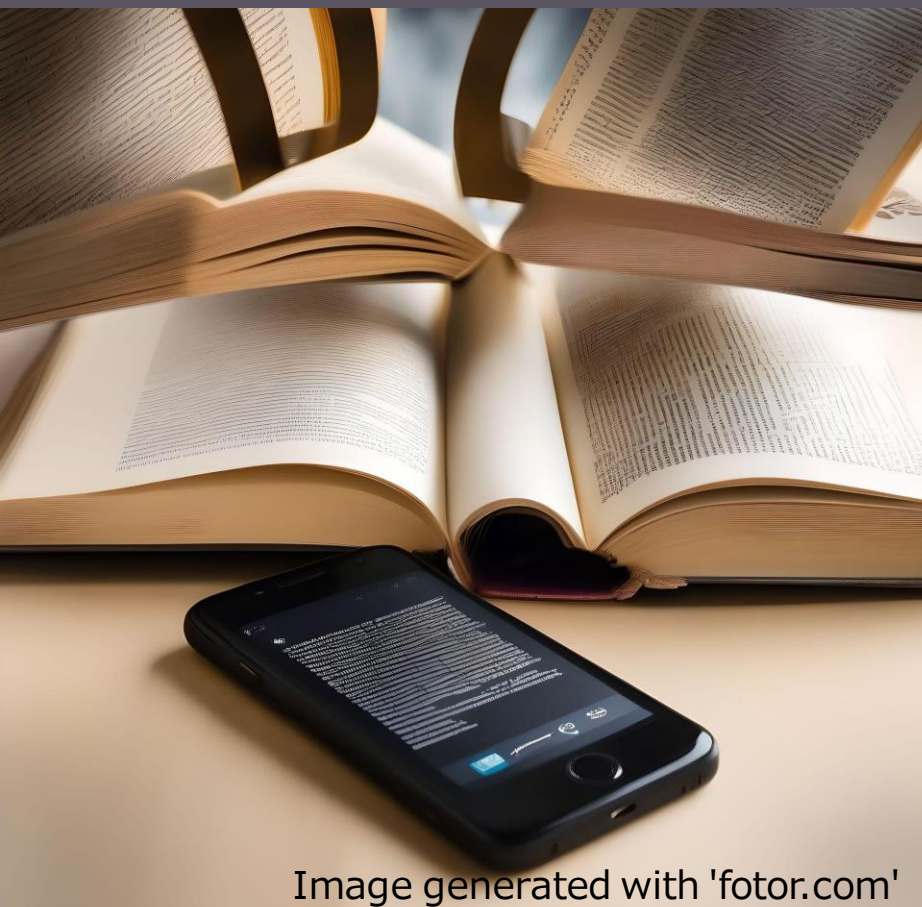
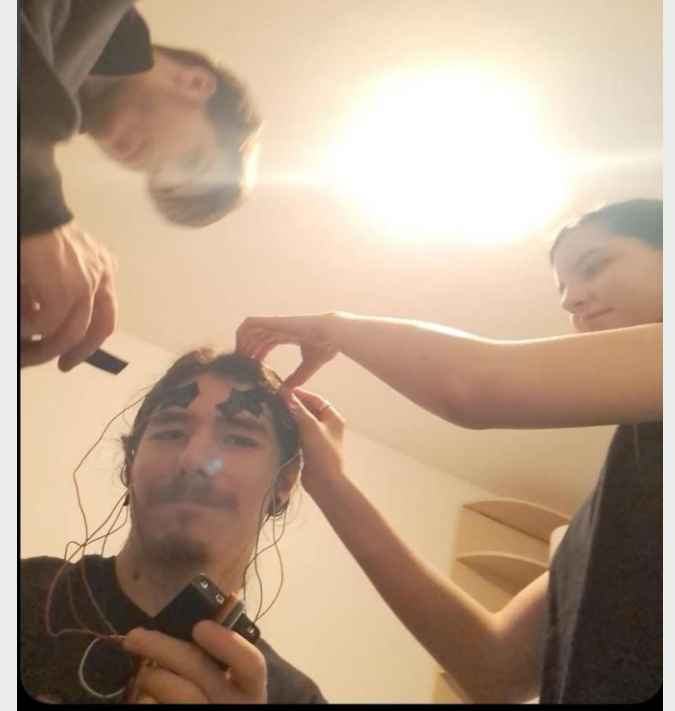


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APPROACH

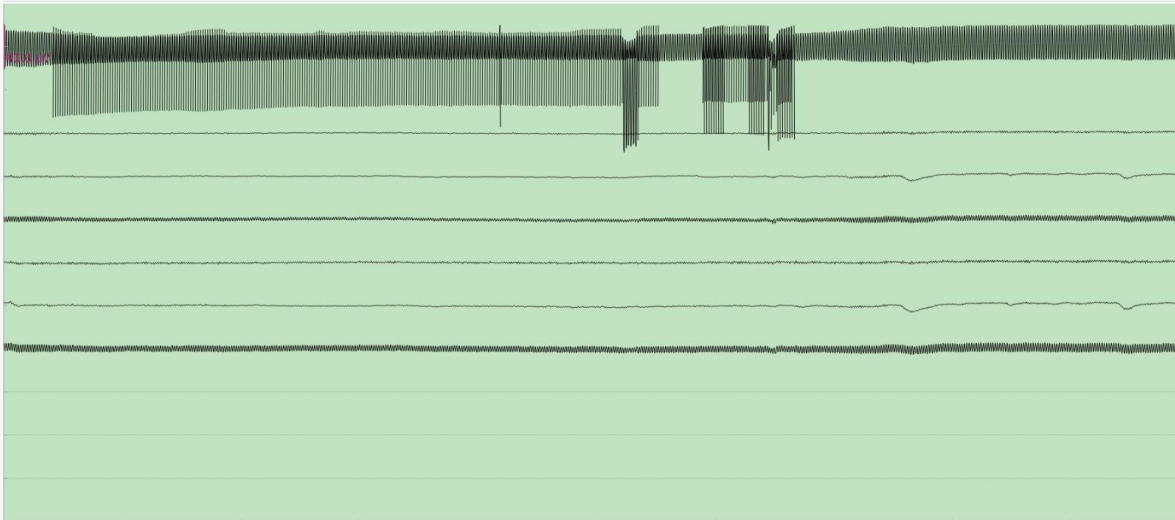
Summary



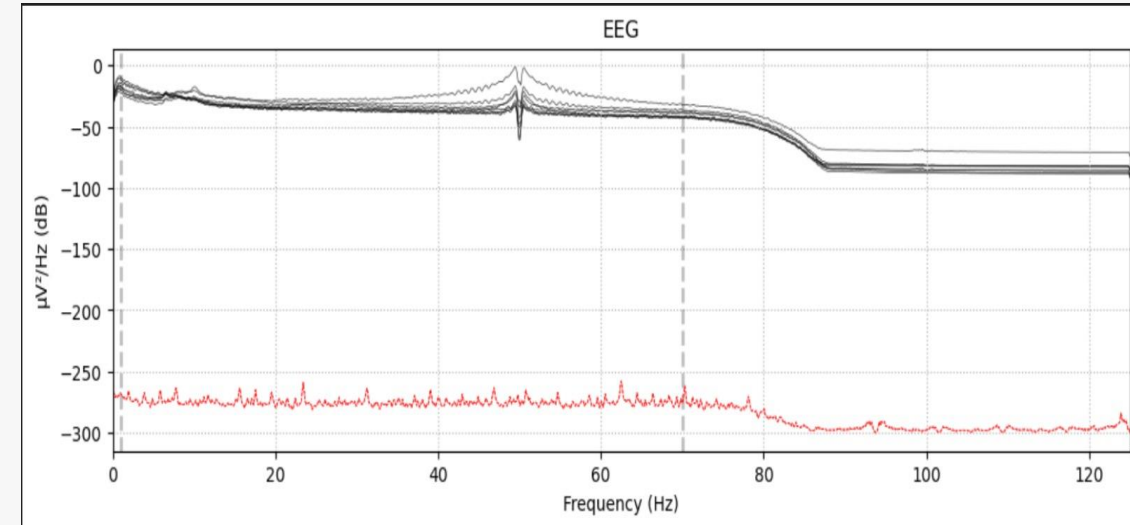
We glued electrodes to the subject's head using special EEG paste. Prior to and after the initial reading session, participants were prompted to relax. They were then provided with a paperback book opened to a specific short story and instructed to read until the story ends, analogous reading from a given smartphone.

Data plots

Before we filter the data

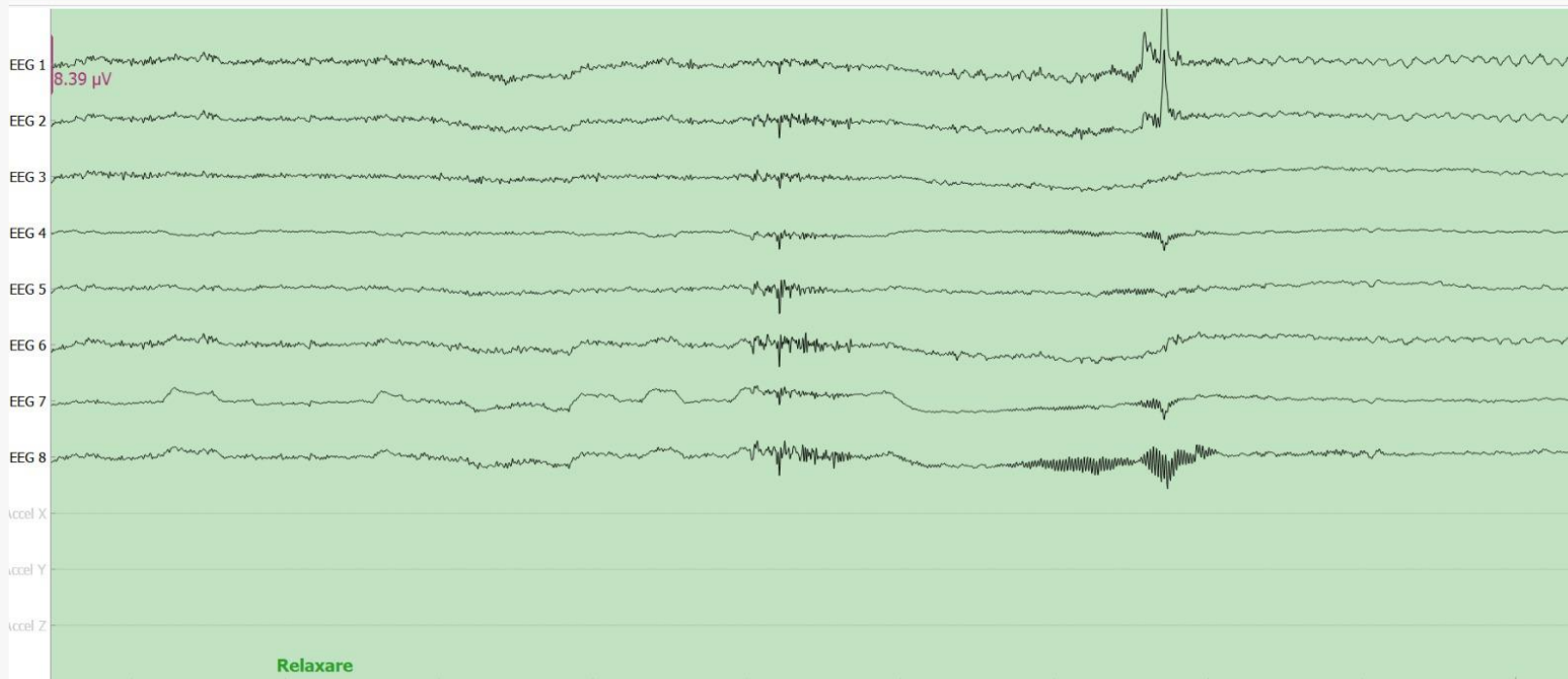


After filtering the data



Data plots

After filters and signal reconstruction with ICA



Limitations



- The number of subjects available
- The working environment

Conclusion

A close-up, high-angle shot of a person's hands working at a desk. The person is wearing a light-colored long-sleeved shirt. Their left hand is on a laptop keyboard, and their right hand is holding a pen over a tablet. The tablet displays a business report with a pie chart and a bar chart. A pair of glasses is visible on the desk next to the tablet. The background is blurred, showing more of the desk and the person's arm.

THANK YOU