

# Controlled Neurofeedback using Mobile EEG and Smartphone

Neurofeedback provides the necessary means to visualize selected and controlled parameters of the brain activity. In healthcare domain, neurofeedback studies enable mitigation of many psychological disorders and illnesses, mainly by therapies that help patients to better self-regulate their brain activity. Electroencephalography (EEG) is the method of monitoring the electrical activity of the brain, thus providing the necessary feedback.

In this thesis work, the student is required to survey the current state of frameworks, techniques, or methods that enable coupling of Mobile EEGs with Smartphones. Bluetooth 2.1 with Enhanced Data Rate (EDR) capability is one of the most effective mean of coupling EEGs with Smartphones. The student would therefore be required to work on the Bluetooth stack to acquire real-time data generated from the Mobile EEGs, parse the electrical signal, and visualize the signal semantically.

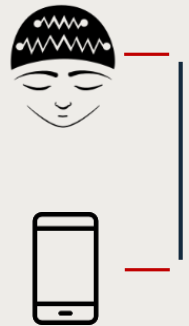
For successful completion of the thesis, the student would be required to identify and address any one of the open challenges faced by the proposed topic. An example of this can be addressing the bandwidth challenges, battery consumption, or signal accuracy.



Master's  
Thesis



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CP



This thesis is ideal for you, if you are familiar with:

1. Smartphone development framework (iOS or Android)
2. Electrical Signal Processing
3. Electroencephalography (EEG)
4. Bluetooth 2.1 standard with Enhanced Data Rate (EDR) capability

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If you interested in further details about the thesis topic, please drop me an email, I'll be glad to further discuss the possibilities with you.

