

Classification of EEG Signals into Normal and Abnormal

PROJECT SYNOPSIS

OF MAJOR PROJECT

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ABSTRACT

An electroencephalogram (EEG) is a test that detects several electric activities in our brain and records them as brain signals which is majorly wave patterns. Small metal discs with thin wires (electrodes) are placed on the scalp that sends the brain signals to the computer to record. Normal activity would have the usual pattern but abnormal EEG has some distinguishable features. Doctors can identify abnormal EEG from the normal ones after some observation.

Although EEGs helps us differentiate between Normal and Abnormal, it is still heavily dependent upon the examiner to give the last judgement. In order to interpret the signals captured by EEG, we need the help of an expert in this field. Our main objective is to lessen the burden on examiner and reduce the time of examination.

The final goal of this project is to automate the whole process of examination of classifying EEGs. We have now focused only on classifying an EEG into its appropriate type. This automation will help reducing the overall time required to identify the EEG and help the examiner.

METHODOLOGY

The main aim of this Project is to reduce time required for EEG classification. We want to explore various pre-processing techniques, traditional machine learning algorithms, and modern deep neural networks to solve this problem. We also want to try some pre-trained model.