Classification of EEG Signals into Normal and Abnormal

PROJECT SYNOPSIS

OF MAJOR PROJECT

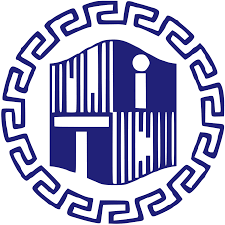
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**ABSTRACT**

We know that our brain functions with various signals. These signals are generated with every activity that we do, even in our sleep. We basically capture these signals by putting electrodes on our scalp and then in the EEG it is recorded as wave patterns. 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 proceed with first pre-processing the data with various methods to learn the distinguishable features in those EEG. Then comes the training of various models. In order to do that we are hoping to use pre-trained models with traditional machine learning algorithms.