**ABSTRACT**

**Topic of Project-**

**Area of Project- Brain Computer Interface**

**Name of Guide- Mr. J. Chandrakanta Badajena**

**ABSTRACT**-

Bio-signals from the brain have found extensive use in medical fields and understanding cognition. Learning process is crucial for every individual in today’s world. However, one thing that largely influences the learning curve is attention and concentration while learning. If the individual or a teacher can quantify the attention of the subject while learning, they can either be reminded of being focused or can condition themselves to improve their concentration. This can be used for children in early childhood or for those suffering from learning disorders like ADHD. This project aims to build a BCI that uses bio-signals to calculate a person’s engagement level and a GUI based application that gives feedback based on the current engagement. The entire system will function like an adaptive learning system that teaches the person that suits his/her preferences, needs and capabilities. In a nutshell, a brainwave reader that constantly measures the potentials will function concurrently with the application. If the concentration of the subject falls below a threshold, a suitable feedback would be given that would either draw the attention of the person or a notification for the user to be focused. Such a system also changes the difficulty of the learning based on the person’s average engagement level in the past as well as the performance throughout the learning process through evaluations.

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