

## **PULSE COUPLED NEURAL NETWORK BASED ANALYSIS TO FIND CORRELATION BETWEEN BRAINWAVE AND BEHAVIOURAL PATTERN**

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### **Abstract**

Correlation between brainwaves (EEG-Electroencephalogram) and human behaviour is an area of active research, stymied by the requirement of large sample size, to come to any definite conclusion. Recent advances in PC-NN (Pulse Coupled Neural Network) has reduced the requirement of sample size to reach a conclusion, significantly. This paper is a result of an observation done on 250 individuals for over three years and mapping their behaviour with their brainwaves (Alpha, Beta, Delta and Theta) taken while making them use personal computers in reading, writing and playing violent computer games. PC-NN is used then to learn these brainwaves to get distinct pattern. An attempt has been made to correlate behavioural pattern of these individuals with their brainwave using PC-NN. Preliminary results obtained from this study are promising.

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**Keywords :** Pulse Coupled Neural Network (PC-NN), Brainwaves, EEG, Artificial Neural Network