

## International Journal of Computer Science and Mobile Computing

A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X

*IJCSMC, Vol. 2, Issue. 12, December 2013, pg.448 – 455*

### **RESEARCH ARTICLE**



# Monitoring Driver Alertness and Avoiding Traffic Collision Using WSN

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*Abstract- Driver drowsiness is among the leading causal factors in traffic accidents occurring worldwide. This paper delineates a method to monitor driver safety by analyzing information related to fatigue using EEG signals. Drowsiness is a state of near-sleep, a strong desire for sleep, or sleeping for unusually long periods. It is also the transition state between awakening and sleep during which a decrease in vigilance is generally observed. Both behavioral and physiological modifications occur during drowsiness. Reaction time is slower, vigilance is reduced and information processing is less efficient, which can generate abnormal driving; it induces an increase of the number and the duration of blinks and yawns. Changes in cerebral activity also happen. Therefore, a drowsy detector system is developed which detects drowsiness using EEG signals. The EEG signals from different persons are analyzed and the feature extraction is carried out through the method Fast Fourier Transform (FFT).The EEG signals are classified as delta, theta, alpha and beta depends on these frequency values to detect driver fatigue and to alert the person.*

*Keywords – Electroencephalogram (EEG) signals; Independent component analysis (ICA); Fast Fourier Transform (FFT).*

Full Text: <http://www.ijcsmc.com/docs/papers/December2013/V2I12201393.pdf>