VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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A REPORT ON PROJECT WORK

"AN IN-VECHILE DRIVER FATIGUE DETECTION AND ALARM SYSTEM"

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ABSTRACT

With the increased traffic density, the number of traffic accidents is being raised. This causes a major issue regarding driver and passengers safety. Driver fatigue is one of the major reasons for traffic accidents. Therefore there is necessity for a simple and effective technology for the detection of driver drowsiness. Clinical research has found physiological signals like heart rate, respiration rate, eye blinking frequency etc. are good indicators of Drowsiness. In this work we have considered only two parameters that is pulse rate and eye blinking frequency for finding fatigue. Drowsiness causes variations in eye blinking frequency, and pulse rate. Our experiment aims to detect this variation that will reflect the degree of drowsiness. These two independent parameters have been fused in order to reduce the chances of false detection and to improve the reliability of drowsiness indicator. System also generates an alarm to the driver to indicate that he has crossed fatigue threshold.

Keywords: human factors, driver fatigue, safety, physiological signal, drowsiness, alarm system.