

Driver inattention detection methods: a review

Abstract

In recent years, driver inattention or distraction is one of the major causes for road accidents. If the distracted driver is alerted on time, most of the physical injuries, deaths, and economic losses can be avoided. To find if the driver is distracted, an efficient inattention detection system has to be developed. Towards the same, researchers have measured driver inattention level based on any one of the following four measures: (1) subjective ratings from the driver, (2) vehicle based measures, (3) physiological measures and (4) behavioral measures. In this paper, we aim to review the above measures used to detect driver inattention based on their advantages and limitations. The issues to be considered while developing an efficient inattention detection system are discussed. The inattention detection system should be designed in such a way that it triggers the alert system only when the driver is distracted beyond the acceptable limit.

Keywords — Behavioral measures, distraction detection system, inattention detection system, physiological measures, road accidents, vehicle based measures