A Review on Pedestrian Detection System for an Intelligent Vehicle

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The increment of road accident involving pedestrian, due to several factors like the driver himself, environmental and vehicle faulty, have pushed everyone to start developing various safety system to minimize it. Various method from special infrastructure (pedestrian lane, zebra crossing), passive system (seatbelt, airbag) and active safety system have been developed, but most of them are just minimizing the risk of injury towards the vehicle's occupant, but do nothing for the pedestrian. Therefore, there is a need to develop a pedestrian detection system (PDS). PDS is an active safety system which is part of the advanced driver assistance system (ADAS) and intelligent vehicle (IV) which acts as an accident avoidance device that can alarm driver in the presence of pedestrian within certain range that may cause an accident, so that the driver can take necessary action to avoid it. Challenges like the complexity of scenery background image, unique representation of pedestrian, to real-time imaging need to be handled in developing such system. The objectives of this research are to develop a system that able to detect pedestrian, run in real-time environment and can be applied inside an intelligent vehicle. It will use a stereo system as the hardware and active contour method will be use as the verification in detecting pedestrian.