

Guidelines for Student Reports

Experimental Testing of a circuit board for the data integration of three different sensors: radar, ultrasonic and infrared sensors

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Abstract

Vehicle accidents due to wild animal crossing is an open issue, constantly investigated in the literature. Different solutions were proposed in the past in order to limit these events to happen. The proposed prototype integrates different sensor technologies, in particular radar sensor, ultrasonic sensor and passive infrared sensor, which allow to sense the presence and the movements of animals which are in their field of view. The data these sensors acquire have to be correctly read and managed in order to give the best representation of the sensed environment only by looking at the acquired data. This should allow the system to avoid fake warning on the presence of animals near the road board and on the contrary to properly sign the crossing of an animal in the surroundings every time it happens. The decision taken on the basis of the acquired data will enable or disable an actuator which will sign the driver the presence or not of a crossing animal.

The key point of the project is to find out a novel strategy to acquire the sensor data, so to exploit in the best way all the prototype components.

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