

One of the most significant uses of computer vision is the self-driving vehicle. In recent years, a large amount of research has been submitted in this area, where the concept of self-driving cars has moved from the unlikely to the probable and imminent, in order to improve the technology and repeated need by global companies

Due to a large number of road death result around the world as a result of car collisions. There are many reasons for such a bad situation that leads to death or disability. This may involve a driver's complete loss of concentration, driver error, or a loss of stability. These dangerous situations will be avoided if all cars use a communications protocol, In addition drivers monitor the vehicles based on their location to prevent collisions. A simple warning in advance can help reduce the number and frequency of crashes

The aim of is thesis is limiting the impact of collisions in our everyday lives and to reduce automobile collisions. The second aim is making the self-driving car able to make decisions without the need for human interference

to achieve these aims, it has been implemented to be consists of two parts: software and hardware. A robot with a camera and a Raspberry Pi microcontroller system making up the hardware

The component of the software is the Yolo artificial intelligence algorithm in real-time, which detects objects on the way, and in this work, we chose the