

## **ABSTRACT**

Today in Indonesia many accidents due to the density of the volume of vehicles that constantly increasing while the capacity is no longer sufficient to contain it, consequently making the congestion in the street segments. Due to the severe congestion of motorists become stressed and distracted, this resulted in the number of accidents increases. And especially when driving in the city usually preoccupied motorists see the situation around the city so that they can not stop the car spontaneously if the car in front suddenly stops, it can cause a collision.

Therefore, to minimize the risk of an accident while driving a car is needed quality security systems in every vehicle, which is necessary to have a tool that can commemorate the car in order to keep its distance.

In this final project, made a prototype detector safe distance to the car runs using ultrasonic sensors based microcontroller ATMEGA8. This tool is intended as a warning to the driver.

**Keywords:** Ultrasonic sensor, Microcontroller ATMEGA8, Alarm