Vehicle collision warning system using laser sensor

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Declaration

I declare that the work contained in this thesis is my own where explicitly stated otherwise. In addition, this work has not been to obtain any other degree or professional qualification.The work was made under the supervision of **Sir Dr. Irfan Ullah** at University of Management and Technology.

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DEDICATED TO

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ABSTRACT

Obstacles occur while covering any type of journey as well as any path that one may follow to achieve a peculiar destination. A scenario related to the above illustrated paradox detains our venturous project. An innovative approach of using laser beam instead of previously used sources to manipulate and calculate distant obstacles to create awareness among technology. A laser beam transmitter is efficiently used to throw a ray of beam into the vacant area which reflects and is solely detected by Light Dependent Resistor which accordingly calculates the distance of the obstacle that reflected,pragmatically sensing the change in the intensity of the beam.

CHAPTER 1
INTRODUCTION

According to the Global level report on road safety reaffirms our concept of road traffic injuries as a global health and developmentproblem. Analysis of recent reports tells us that more than 1.2 billion people die on the world's roads every year, and almost 50 million others are injured [1]. The Global level report on road safety captures our attention to the need of all the road users. Studies proved that if the driver of the vehicle is alerted half a second before a possible accident, any system of warning that can warn the driver just before that instant can reduce rear end major collisions/accidents by 30%, the road related accidents could be reduced by 50% and head-on crashes by 60% [2].
Therefore, studies on collision avoidance systems have become a hot topic in both research academia and automotive industries in many countries, in order to reduce traffic accidents. Many combined attempts are being made for prevention of such mishaps including laws amendment, policy-making, creating awareness amongst people through different sources and technical research work on advanced driver assistance system.