

# BAHRIA UNIVERSITY ISLAMABAD CAMPUS

## DEPARTMENT OF COMPUTER ENGINEERING

## **ACCIDENT PREVENTION SYSTEM**

BY

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### **CERTIFICATE**

We accept the work contained in this report fulfillment of the degree of Bachelors in Con	as a confirmation to the required standard for the partial
Turriment of the degree of Bachelors in Cor	inputer Engineering.
Head of Department	Supervisor
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#### **CERTIFICATE OF AUTHENTICITY**

This is to certify that this thesis work entitled "Accident Prevention System" submitted by Mr. Farhan Haroon and Mr. Syed Wasim Haidar is a bona-fide thesis work carried out under my supervision and guidance which is fulfilling the nature and required standard for the partial fulfillment of the degree of Bachelors in Computer Engineering. The work embodied in this thesis has not been submitted elsewhere for a degree.

Engineer Suleman Awan

Supervisor

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#### **DEDICATION**

We would like to dedicate this project to all the humanity out there because the main concept of this work is to believe in that every human being is equal and every soul is precious. Especially we would like to thank our parents, siblings and some friends who never gave up on me no matter how much tensed we were when the complexity of the project was getting increased and we were stuck on some errors. There believe in us gave us hope and energy that we will never let their expectations down and we finally achieved our goals at the end. We hope that our little effort to promote equality among the society would inspire every reader to stand against the racial discrimination and to support human equality because no matter from which race or religion you are from, every soul deserves the same importance!

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#### **ACKNOWLEDGMENTS**

We must acknowledge as my some faculty members and our lab attendants who supported our research and allowed us to even do research in the lab for some extra hours after the closing time. Especially, we need to express our gratitude and deep appreciation to my our supervisor Sir Suleman Awan and also Sir Arsalan Akhtar who guided us throughout the project regardless of how the technical and complex the situation was! They have consistently helped us to keep perspective on what is important in life and shown me how to deal with reality. The real encouragement for us came was their dedication and love for the technology which was a great inspiration for us and it gave us hope that we can achieve what we have started because in the start, many people predicted that this project cannot be completed with this level of cheaper rates that we are suggesting but Sir Suleman's positive energy and step by step guidance helped us to successfully end this project on time.

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#### **ABSTRACT**

This project is based on providing an automatic pre-crash danger indication strategy in order to avoid a collision. As the name indicates that this project focuses on providing an attractive, low in price and intelligent environment with precise measurements to avoid accidents on roads. Inputs and outputs are being controlled by the combination of ultrasonic sensor, laser sensors, GPS sensor and rain sensor to achieve the best response time. A perfect combination of collision detection and blind-spot assist with an external output display makes it an interactive project with numerous options of upgrading and flexibility for future extensions.

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