**SMART ROADS – VEHICLE COLLISION PREVENTION SYSTEM**

***Project Report Submitted by***

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**UNDER THE GUIDANCE OF**

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**Assistant Professor**

***in partial fulfillment of the requirements for the award of the Degree of***

**Bachelor of Engineering in**

**Computer Science and Engineering**

***from***

***Visvesvaraya Technological University, Belgaum***

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**N.M.A.M. INSTITUTE OF TECHNOLOGY**

(An Autonomous Institution under VTU, Belgaum)

(AICTE approved, NBA Accredited, ISO 9001:2015 Certified)

**NITTE –574 110, Udupi District, KARNATAKA**

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**NITTE –574 110, Udupi District, KARNATAKA**

**DEPARTMENT OF COMPUTER SCIENCE AND**

**ENGINEERING**

CERTIFICATE

*Certified that the project work entitled*

***“SMART ROADS – VEHICLE COLLISION PREVENTIONSYSTEM”***

*is a bonafide work carried out by*

***Rithika Chowta (4NM14CS135)***

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*in partial fulfilment of the requirements for the award of*

***Bachelor of Engineering Degree*** *in* ***Computer Science*** *and* ***Engineering***

*prescribed by* ***Visvesvaraya Technological University, Belgaum***

*during the year 2017-2018.*

*It is certified that all corrections/suggestions indicated for Internal Assessment have been*

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**Signature of Guide** **Signature of HOD** **Signature of Principal**

**Semester End Viva Voce Examination**

**Name of the Examiners**

**Signature with Date**

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**ABSTRACT**

Blind curves are one of the leading causes of road accidents. Vehicles speeding along a curve are not aware of the presence of vehicles coming from the other direction. Here, a system is proposed to alert drivers going around a blind curve to the presence of oncoming vehicles. 2 poles are erected on either side of the curve, bearing cameras, red and green LED lights and piezoelectric buzzers. They are connected to a Raspberry Pi. The live video feed from the cameras is processed to detect the presence of vehicles. If vehicles are approaching on both sides of the curve, the buzzers and red lights are activated, thus alerting the drivers of the vehicle to slow down. Then the green LED is activated on one side to allow one vehicle to move forward. After it passes, the other vehicle is allowed to move by activating the green LED on the other side. Red LED is reactivated on the previous side, to stop any vehicles that were behind the first vehicle. After all vehicles pass, all LEDs are deactivated.

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