# LANE DETECTION FOR AUTONUMOUS VEHICLES

**USING OPENCV**

**(Mini Project)**

**By**

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# UNIVERSITY COLLEGE OF ENGINEERING & TECHNOLOGY MAHATMA GANDHI UNIVERSITY

**COMPUTER SCIENCE AND ENGINEERING PANAGAL, NALGONDA – 508001**

June 2022



**DECLARATION**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the University or other institute of higher learning. Except where due acknowledgment has been made in the text.

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**CERTIFICATE**

This is to certify that project report entitled “**LANE DETECTION FOR AUTONOUMUS VEHICLES USING OPENCV”** which is submitted by the **CH.VAMSHI(4511-18-733-017), K.SHIVAPRASAD(4511-18-733-016),P.SHRAVYA(4511-18-733-034)** in partial fulfilment

of the requirement for award of degree B.Tech Department of Computer science & engineering of University college of Engineering and Technology , panagal, is record of the candidate own work carried out by him under my/our supervision. The matter embodied in project is original and has not been submitted for the award of any other degree.

**Signature**

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**ACKNOWLEDGEMENT**

It gives us a great sense of pleasure to present the report of the B. Tech Mini project undertaken during B. Tech Third year. We own special debt of gratitude to **M.JYOTHIRANI Department of Computer science and engineering**. University college of Engineering & technology, panagal for his constant source of inspiration for us, it only his cognizant efforts that our endeavours have seen light of the day. We also take the opportunity toacknowledgement the contribution of **JYOTHI RANI** Head. **Department of Computer science & Engineering**, University College of Engineering & Technology panagal for his full support and assistance during the development of the project. We also do not like to miss the opportunity to acknowledgement the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.

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 **ABSTRACT**

For vehicles to be able to drive by themselves, they need to understand their surrounding world like human drivers, so they can navigate their way in streets, pause at stop signs and traffic lights, and avoid hitting obstacles such as other cars and pedestrians. Autonomous Driving Car is one of the most disruptive innovations in AI. they are continuously driving our society forward and creating new opportunities in the mobility sector. An autonomous car can go anywhere a traditional car can go and does everything that an experienced human driver does. But it’s very essential to train it properly. One of the many steps involved during the training of an autonomous driving car is lane detection, which is the preliminary step. Today, we are going to learn how to perform lane detection using videos. Based on the problems encountered in detecting objects by autonomous vehicles an effort has been made to demonstrate lane detection using OpenCV library. The reason and procedure for choosing grayscale instead of colour, detecting edges in an image, selecting region of interest, applying Hough Transform and choosing polar coordinates over Cartesian coordinates has been discussed.

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