**A PROJECT REPORT ON**

# TRAFFIC SIGNAL VIOLATION DETECTION IN MACHINE LEARNING

Submitted in partial fulfillment of the requirements for the award of the degree Of

**BACHELOR OF TECHNOLOGY**

By

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(Autonomous)

(**Approved by AICTE & Affiliated to JNTUA, Ananthapuramu)**

**2020-2024**

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**BONAFIDE CERTIFICATE**

This is to certify that the mini-project report on “**TRAFFIC SIGNAL VIOLATION**

**DETECTION IN MACHINE LERNING”** is a genuine work of

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Submitted to the department of computer science and engineering, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Computer Science and engineering, during the academic year 2020-2024.

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Submitted for University Examination held on\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Internal examiner External examiner

**DECLARATION**

We affirm that the project work titled “**TRAFFIC SIGNAL VIOLATION DETECTION IN MACHINE LEARNING**” being submitted in partial fulfillment for the award of Bachelor of technology in computer science and engineering, is the original work carried out by us. It has not formed the part of any other project work submitted for award of any degree, either in this or any other university.

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**ABSTRACT**

The Traffic Signal Violation Detection project aims to improve road safety and traffic management by developing a system that can accurately detect and monitor violations at traffic signal-controlled intersections. The system utilizes machine learning algorithms and computer vision techniques to analyze real-time video feeds from cameras installed at intersections, recognizing traffic signal states and identifying vehicles. By applying advanced object detection and tracking algorithms, the system can detect and classify violations such as running red lights, disregarding stop signs, and making illegal turns. The system generates real-time alerts and stores violation records for further analysis and enforcement purposes. Additionally, the project includes a user-friendly interface for operators to monitor live video feeds, access violation records, and configure system settings. With the implementation of this system, traffic authorities can proactively detect violations, promote road safety, and optimize traffic flow at intersections.

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