
**DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING**

**DAYANANDA SAGAR COLLEGE OF ENGINEERING**

*AN AUTONOMOUS INSTITUTE AFFILIATED TO VTU*

*APPROVED BY AICTE & UGC, ACCREDITED BY NAAC WITH 'A' GRADE, ACCREDITED BY NBA.*

**Project Synopsis**

**On**

# "Solution to traffic problem in congested area"

**Submitted as a part of the first year (Second Semester) mini project of**

**BACHELOR OF ENGINEERING**

**In**

**INFORMATION SCIENCE AND ENGINEERING**

***Submitted by***



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***Under the guidance of***

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**2022-2023**

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| **TITLE OF THE PROJECT** | Smart Traffic Management System Using AI. |
| **PROJECT TIMELINE (Tentative Start and End Date)** | June-September 2023 |
| **FIELD OF PROJECT** | Artificial Intelligence (Computer Vision) |
| **OBJECTIVE OF THE PROJECT** | Improve Flow of Traffic, Reduce Pollution |
| **PROBLEM STATEMENT** | Developing a Smart traffic management system using AI to optimize traffic flow, reduce congestion, while minimizing the travel time and maximizing mobility, |
| **INTENDED BENEFICIARIES OF THE PROJECT** | Commuters, Authorities, Emergency Service |
| **BASE PAPERS/ RELATED WORK** | Alleviating Road Traffic Congestion with Artificial Intelligence |
| **SOFTWARE/HARDWARE REQUIREMENTS** | Raspberry Pi or equivalent SBC, Day/Night Surveillance Cameras, Tensor Flow, Open CV |

## BACKGROUND OF PROJECT WITH REGARD TO THE DRAWBACK ASSOCIATED WITH EXISTING PROJECT

This project aims to demonstrate and apply the methods discussed in the existing article, moreover, the improved model provides faster response time for emergency services.

## ABSTRACT

This project aims to make an existing system of traffic lights better by applying methods discussed in mentioned article. The primary objective is to make traffic more streamline in urban area and improve the response time of emergency services, addressing a drawback associated with the classic traffic light system. The existing system is slow and don't consider a lot of factors and have timed signals which causes traffic congestion, which can cause delays in emergency service like ambulances and has a greater environment impact. By using AI in our project we provide a better traffic flow and reduced waiting time. The results of this project will contribute benefiting the individuals and authorities

## PROJECT METHODOLOGY

1. Problem Analysis: The project will start with a thorough analysis of the existing traffic light system and its drawbacks
2. Data Collection: Data related to traffic patterns, vehicle movement, and emergency service response times will be collected from various sources
3. AI Model Development: After data collection we will develop a AI Model that can recognise and understand traffic patterns
4. Integration and Testing: developed AI model will be tested in the existing traffic light system.
5. Documentation and Reporting: documentation of the project methodology, findings, and outcomes will be prepared. A final report will be generated and submitted to Department

## REFERENCES


Sharon, G. (2021). Alleviating Road Traffic Congestion with Artificial Intelligence. In *IJCAI* (pp. 4965-4969).

Arnott, R., & Small, K. (1994). The economics of traffic congestion. *American Scientist*, *82*(5), 446-455.

[Science Magazine]. (2018, November 14). *AI trained to control traffic* [Video]. YouTube https://www.youtu.be/6gLHDCLT2Gc


**Name and signature of the Students** **Signature of Guide with Date**

**Project Coordinators** **HOD-ISE**