

Submission Summary

Conference Name

International Conference on Big Data Analytics in Bioinformatics

Track Name

Big Data & Data Analytics

Paper ID

13

Paper Title

Autonomous Traffic Flow Control Through V2X Communication

Abstract

The development of a cutting-edge Traffic Sign Detector (TSD) system is pivotal for enhancing road safety and traffic management. Integrated with state-of-the-art Convolutional Neural Network (CNN) technology trained on annotated traffic sign images, it accurately recognizes, categorizes, and localizes signs in images and videos, aiding decision-making. Adaptive learning mechanisms ensure reliability across diverse conditions, contributing significantly to driver awareness, compliance, and traffic flow optimization. Concurrently, research focuses on integrating autonomous technologies and Vehicle-to-Everything (V2X) communication, refining traffic dynamics through real-time coordination and congestion reduction. Meticulous simulation-based analyses assess system adaptability and performance, considering real-time data exchange and responsiveness to unforeseen events. Ethical considerations and data privacy are paramount, ensuring responsible implementation. This research aims to propel the development of intelligent traffic control systems for a safer, more optimised urban mobility ecosystem, ultimately redefining the dynamics of urban transportation.

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Last Modified

24/4/2024, 6:30:45 PM

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Submission Files

Final Research Paper.docx (1 Mb, 24/4/2024, 6:30:28 PM)
