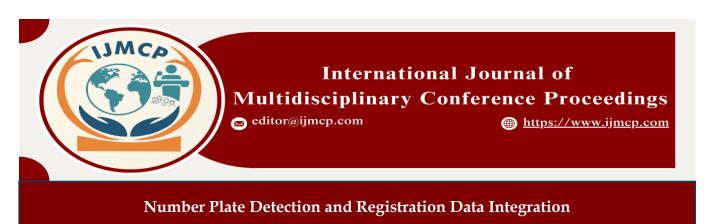
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| KEYWORDS | ABSTRACT |
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| Licence Plate Recognition System, Data Integration | This project focuses on the development of a real-time number plate detection and registration data integration system using computer vision and deep |
| ARTICLE HISTORY Date of Publication:16-04- 2025 Conference Organizer(s) Research Consultancy on Social & Management Development & University of Karachi DHA Suffa University | learning techniques. The system is designed to capture live video streams, detect vehicle number plates, extract alphanumeric characters using Optical Character Recognition (OCR), and retrieve vehicle registration details from a pre-existing database. The system operates in multiple stages: 1. Video Capture: A live feed is obtained from surveillance cameras or other video input sources. 2. Number Plate Detection: Using deep learning-based object detection models such as YOLO (You Only Look Once), the system identifies and extracts the region of interest (ROI) containing the number plate. 3. Character Recognition: OCR techniques, such as Tesseract OCR or deep learning-based text recognition models, are applied to extract alphanumeric characters from the detected number plate. 4. Database Integration: The extracted number is matched against a vehicle registration database to retrieve relevant details, such as the owner's information, vehicle model, registration validity, and law enforcement records. The primary objective of this system is to enhance security, traffic monitoring, and law enforcement operations. By automating vehicle identification, it can |
| | assist in detecting stolen vehicles, traffic violations, unauthorized access, and criminal activities. |
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