

# **VEHICLE OBJECT DETECTION DESIGN ON JOGJA TRAFFIC CCTV FOR CLASSIFICATION BASED ON VEHICLE TYPE USING THE YOLO V3 METHOD**

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## **ABSTRACT**

*Vehicle object detection technology has become very important in optimizing traffic monitoring and management in urban areas. In densely populated cities like Jogja, dense and complex traffic requires efficient solutions to overcome congestion problems and improve road safety. In relation to this, this research aims to design and implement a vehicle object detection system on CCTV installed at strategic points in the Jogja traffic area. Vehicle Object Detection Design on Jogja Traffic CCTV for Classification Based on Vehicle Type Using the Yolo V3 Method is a system designed to recognize objects in images using the deep learning technique YOLO (You Only Look Once) version 3. At the preprocessing stage, the image is converted into a format that can be processed by the YOLO V3 model. In the object detection stage, the YOLO V3 model is used to recognize objects in images with a high level of accuracy. At the post processing stage, the object detection results obtained are further processed to produce a more informative output. This system can be used for various applications such as security surveillance, facial recognition, and vehicle detection. Additionally, this design can be improved by incorporating other techniques such as image processing and pattern recognition to improve the accuracy and performance of the system.*

*Keywords: Object detection, image, YOLO V3, deep learning, preprocessing, postprocessing, accuracy, performance, image processing, pattern recognition, security monitoring.*