

## **Abstract**

Vehicles are the most widely used means of transportation in Indonesia. The vehicle license plate is a sign of a vehicle in Indonesia. The vehicle number plate in Indonesia consists of letters and numbers, where each region has its own vehicle number plate code. Currently, the government has introduced regulations odd and even on vehicles in Indonesia. Therefore, a system is needed that can detect even and odd numbers on the vehicle number plate. In this study, the authors used the Vertical Edge Detection Algorithm (VEDA) method to help detect vehicle number plates, and the K-Nearest Neighbor (KNN) method to identify vehicle numbers. Some of methods were used in this study, such as the Adaptive Thresholding (AT) method using Integral Image to simplify the process of finding margins on the vehicle number plate, and the Vertical Segmentation method used for character segmentation on the vehicle number plate. The dataset used in this test is 150 vehicle datasets and 5,040 characters with 36 classes. On testing set, the system can identify even and odd numbers on vehicle plates with an accuracy of 73.50%.

***Keywords: vehicle, vehicle license plate, adaptive thresholding , vertical edge detection algoritihm, vertical segmentation, k-nearest neighbor.***