ABSTRACT

Slope Detection with road lane detection using *Image Processing* is one of method that used to detect boundary of road using the different range of color from road environment to distinguish road lane and non - road lane. This research using the road lane detection method that inspired and based on previous research that we modified and develop to detect the slope of road using OpenCV libraries and Linear Regression Method. Detection is done by making an intersection line from upper and down line that detected from *Image Processing*. This Research using a truck prototype with 1:11 dimension to simulate the system and using prototype road to with same dimension of the truck. The result show that system can detect slope of the road with accurate value reach 90%. Based on slope experiment then system can predict the ability to pass through contoured road with payload weight and angle of the slope.

Keywords: Lane Detection, Road Slope, OpenCV, Linear Regression