

ABSTRACT

Green Open Space(GOS) is an important component in the balance of the environment and people's lives. Vegetation is the largest component in the GOS. The existence of vegetation for GOS can be seen via satellite imagery. Based on the image ,this final project was made for a simulation system that can detect vegetation for GOS in part a satellite image.

This final project will discuss the analysis and simulation of vegetation by color to green open spaces. Image data used are google satellite image data. The algorithm used for image recognition system implementations are using K-means clustering. K-means clustering is used to make parts of color, as well as separating the sections and will be compared with the input image to obtain a percentage value comparison with the initial image.

Results of the tests are of all test images are taken and used, color grouping can be done well with error rate about 0.021% with the image data used as many as 220 images scattered throughout the city of Bandung with a total area $49,402\text{Km}^2$ and extensive vegetation obtained by measuring $14,208\text{Km}^2$ or 28.67 % of the total area of the data.

Keywords: Vegetation, Green Open Space, K-means clustering, Digital Image Processing