Abstract

Vehicle identification based on image processing is the basic key behind this paper. This technology has been obtained world wide attention nowadays due to low cost, flexibility, ease of access, potential towards collision avoidance and accuracy. In most cases the vehicles are identified on the basis of colour, texture, histogram, hue, saturation, contrast etc. Gabor filter obtained from Gaussian filters are mainly used in image processing due to its better performance. But the main drawback of Gabor filters is related to the frequency response. The bandwidth is limited to reduce the DC noise components. Moreover filter banks have to be used. So a novel idea called Log Gabor filter has been suggested to overcome the drawbacks. Log Gabor filters are designed as Gaussian functions on log axis, which is in fact spatial frequency response of visual neurons. The result expected is that the frequency response
Modified Gabor Filter based Vehicle Verification

concentrates on both lower and higher frequencies. It helps to represent uneven frequency content of the image and redundancy of lower frequencies will be reduced. In this paper, a comparison between Gabor and Log Gabor filter is proposed. The classification is done using SVM and neural networks.

References

- Younghyun Lee, Taeyp Song, Bonhwa Ku, Seoungseon Jeon, David K. Han, Hanseok Ko, "License Plate Detection using Local Structure Patterns," in proc.


Index Terms

Computer Science
Image Processing

Keywords
Gabor Filters  log Gabor Filters  svm  neural Networks