A Novel Approach for the Implementation of Classification Algorithms for Detecting Shadow and Non-Shadow Regions of an Image

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Abstract

Many image analysis tasks require a classification procedure to identify the shadowed and non-shadowed areas of an image, so that once the shadowed areas are known, the clarity of the image can be improved. The main aim is to detect the anomalous regions of an image. There are numerous techniques of doing so. One of the best ways is to find hyper plane that can be identified to find the difference between the shadow and non shadow areas in the image by using classification algorithm. Thus this research will be to compare various classifiers on the basis of various parameters that which one proves the best in terms of identifying the boundary of shadow and non shadow areas in images. The classification algorithms used in this case would be Support Vector machine (SVM), K- Nearest neighbour (KNN) and Bayesian networks.

References

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Yan Li, Tadashi Sasagawa, Peng Gong – "A system of the shadow detection and shadow Removal for high resolution city aerial photo."

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Index Terms

Computer Science

Image Processing

Keywords

Shadow  Hyper Plane  Support Vector Machine (svm)  K-nearest Neighbor(knn)  Bayesian Classifier

Segmentation

Seed Points
Scene Analysis

True Positive

True Negative

False Positive

Negative

Sensitivity

Specificity

Accuracy