

Audio Assistance for blind people in Recognizing clothes patterns and colors using Modified SVM

ABSTRACT :

In this project, the system of automatically recognizing clothes pattern and colors are proposed. The image is captured by the camera and gets processed to identify the pattern of the clothes that is chosen. This can be classified using the support vector machine algorithm. For this the features of the image have to be obtained. These features can be extracted using three descriptors.

The Radon Signature descriptor is to extract statistical properties, the wavelet subbands are used to extract global features of clothing patterns. This gets combined with local features that are obtained from scale invariance feature transform to recognize complex clothing patterns. After identifying the features the support vector machine classify the images in order to their categories. The system uses the CCNY Clothing Pattern dataset.

This system can be an effective method for all the visually impaired people that they can identify the pattern and respective colors without any help. Finally we gave audio assistance which can be helpful for blind people. Further SVM classifier accuracy can be improved using Fuzzy Logic.

Reference:

Assistive clothing pattern recognition for visually impaired people published in IEEE transactions on human machine systems, vol.44, no.2, April 2014. Here's the link to the paper <https://pdfs.semanticscholar.org/eb57/cb0379d2300bc80c693e9d0e2ec41eea6df1.pdf>

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