A THESIS REPORT
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ABSTRACT

In this thesis a new feature extraction technique for activity recognition is used. And at the same time combining the two basic classification techniques uses a new classification technique. Since the two basic used classifications are near about complement to each other and by using both of them at a time for activity recognition can improves efficiency. By assuming and with this motivation started this research and at that came true. Feature extraction technique uses texture-based segmentation to get human blob. This technique is not used till now but this seams a useful in applications like action recognition. On the other hand at classification two classification techniques are used. There are some issues with the SVM in the multi class applications. In multi class there remains classes that are not classifiable for these type of class a new classification technique can be used. Here in our case nearest neighbor technique of classification seems useful because it does not have to bother about linearity of the dataset but works on distance metric. Since KNN it self is not much useful because it is unable to handle larger size of data. KNN is used after SVM and only to those classes which do get differentiated by the SVM so KNN do not have to handle large data and hence an easy solution to the classification comes up.

In addition to this, this research starts with another classification technique that is Linear Discrimination Analysis. Although it does not result in good efficiency yet gives a fine idea about action recognition. All the three classification techniques are used here for classification and there results are also included in this thesis. A mention of PCA is also required because it is also used here for dimension reduction because data generated from this feature extraction technique is large.

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