基于时空兴趣点和密集轨迹特征加权融合的行为识别方法研究

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摘　要：针对目前行为识别方法中特征融合的低效性问题，提出了一种新的特征加权的融合方法，将基于稠密轨迹（Dense Trajectory）的特征与时空兴趣点特征（STIP）加权融合，并通过利用支持向量机(SVM)分类学习实现行为识别.该方法能够有效增大判别力较强特征的权重，从而给最终的识别精度带来裨益.在行为识别领域广泛使用的 KTH 数据集、UCF sports 数据集上进行测试.与目前最新的方法实验结果对比表明，提出的方法是有效的，且具有较强的鲁棒性.

关键词：行为识别；特征加权；融合；支持向量机

Human Action Recognition with Weighted Feature Fusion

Based on STIP and Dense Trajectory Feature

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Abstract：Aiming at the low performance of feature fusion for human action recognition, we proposed a new weighted fusion method based on feature fusion. This method, by fusing weighted features based on Dense Trajectory with feature based on Spatial Temporal Interest Point, and by utilizing SVM classifier, realized recognizing human actions. Our method can add more weight to feature with higher classification power, which can benefit final recognition result. We test the proposed method on used-widely KTH dataset and UCF sports dataset. Comparison of our experiment results with those of the newest methods shows that our method is effective and has strong robustness.

Key words：action recognition; weighted feature; fusion; support vector machines

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