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研究简报

联合人体模型与块生长的人群目标分割

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摘要
人群目标的准确分割，是进行多相机联合目标跟踪与识别的关键。该文首先构造包含位置、尺寸、姿态信息的人体粗略姿态模型，并利用贝叶斯模型获得对应的目标模型。然后将前景区域利用分水岭算法划分为颜色分布一致的子块，通过位置和颜色约束解决遮挡目标的种子块选取问题。最后通过块生长获得每个目标区域。对于颜色相似子块，通过比较其产生的边缘能量确定其所属目标。实验结果表明，本文能够实现对人群目标较精确分割，且对背景噪声具有一定的抗干扰能力。

关键词 贝叶斯模型 姿态模型 目标分割 块生长 分水岭算法

分类号 TP391.4

Human Pose Model and Block Growth Combined Crowd Segmentatio

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Abstract
Crowd object segmentation is a key issue of the object tracking and recognition in multiple cameras. Human rough models with position, scale and pose information are constructed and then get the corresponding models by using Bayesian model. Then, the foreground is segmented into blocks of similar color distribution. Then the problem of the seed blocks selection is solved thought of color and position information under human inter-occlusion, and human region is received by seed growth. For blocks with similar color, they are merged into the objects by comparing the edge energy they brought. It can be seen that the method could segment the crowd precisely, and is not sensitive to background noise from the experimental results.

Key words Bayesian model Pose model Object segmentation Block growth Watershed algorithm

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