

## 基于组合区域形状特征的物体检测算法

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## Object Detection Based on Shape Feature of Combined Regions

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摘要

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**摘要** 该文提出了一种基于组合区域形状特征的物体检测算法,通过图像分割后各个区域之间的关系,组合选取候选目标,提取候选目标夹角链码和弧弦距比特征,构造并联支持向量机分类器。算法对分割要求不高,可对模糊和低对比度的图像目标进行正确检测。通过在ETHZ图像类库上对算法进行测试,验证了算法的准确性。

**关键词:** 目标检测 形状特征 组合区域 支持向量机

**Abstract:** An object detection algorithm based on shape feature of combined regions is presented. Object candidates are first extracted by combining segmented regions, and then their feature vectors which contain angle chain and ratio of arc-chord distance to chord length are obtained. The parallel support vector machines are trained. The proposed algorithm requires low segmentation quality and can detect objects in blurred or low contrast images. The experiment on ETHZ Shape Classes demonstrates the effectiveness of the proposed algorithm.

**Keywords:** Object detection Shape feature Combined region Support vector machine

Received 2011-03-16;

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**引用本文:**

王晏, 孙怡. 基于组合区域形状特征的物体检测算法[J] 电子与信息学报, 2011, V33(12): 2894-2901

Wang Yan, Sun Yi. Object Detection Based on Shape Feature of Combined Regions[J], 2011, V33(12): 2894-2901

**链接本文:**

<http://jeit.ie.ac.cn/CN/10.3724/SP.J.1146.2011.00233> 或 <http://jeit.ie.ac.cn/CN/Y2011/V33/I12/2894>

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