

基于颜色高效匹配核的图像检索研究

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摘要: 颜色特征对图像的各种变换具有很好的鲁棒性, 使其在图像检索中发挥了重要作用, 但传统颜色特征中缺乏空间分布信息, 检索性能不佳. 通过图像分块捕获颜色的空间分布信息, 并引入高效匹配核, 把局部颜色特征映射到低维空间, 生成比传统颜色特征 RGB、HSV 等判别性能更优的颜色高效匹配核特征 CEMK(Color Efficient Match Kernels), 基于 CEMK 完成商品图像检索. 结果表明: 颜色高效匹配核能有效地改善基于颜色的图像检索性能.

关键词: 颜色高效匹配核; 图像检索; 电子商务; 颜色空间

Research on Image Retrieval Based on Color

Efficient Match Kernels

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Abstract: As is known to all, color features have excellent robustness for each kind of transformation of an image so that they play important roles in image retrieval. Whereas the traditional color features lack the spatial distribution information so that lower retrieval performance is got. Spatial distribution information of color features is achieved by image blocking firstly. Secondly, efficient match kernels are introduced to map the local color features into color efficient match kernels of low dimension, which have better discriminate ability than the traditional color features. Finally, retrieval experiments are executed based on the color efficient match kernels. Experiments show that the color efficient match kernels can improve the image retrieval performance effectively.

Key words: color efficient match kernels; Image retrieval; e-commerce; color space

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