

图形、图像、模式识别

图像识别中的兴趣点匹配方法研究

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收稿日期 2008-8-28 修回日期 2008-11-17 网络版发布日期 2010-2-8 接受日期

摘要 针对图像检索识别的需求, 提出了一种基于兴趣点的匹配算法, 利用小波变换对图像进行降维和去噪, 提取其SIFT点特征, 同时进行PCA降维, 最后采用基于K-d树的最近邻法进行快速匹配。通过对各种图像大量的实验, 结果表明, 该方法具有很强的匹配性和鲁棒性, 是一种较好的图像匹配算法, 可以广泛应用于图像的检索和识别中。

关键词 [兴趣点](#) [SIFT算法](#) [主成分分析 \(PCA\)](#) [快速匹配](#)

分类号 [TP391](#)

Fast matching algorithm based on interest points

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Abstract

According to the need of the image searches and recognition, one kind of the matching algorithm based on interest points has been brought forward, firstly making use of wavelet transform to realize image dimension reduction and de-noising, extracting its SIFT characteristic points, and finally carrying out matching using nearest neighbor method based on K-d tree. Adopting the algorithm to carry out large numbers of experiments to many kinds of images, final results indicate that the algorithm is superior, has strong matching ability and robustness, is one kind of fairly good image matching algorithm and can be widely applied to image retrieval and recognition field.

Key words [interest points](#) [SIFT algorithm](#) [Principal Component Analysis \(PCA\)](#) [fast matching](#)

DOI: 10.3778/j.issn.1002-8331.2010.05.040

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