计算机工程与应用 2010 46 (6): 178-180 ISSN: 1002-8331 CN: 11-2127/TP

图形、图像、模式识别

血细胞图像分割的改进MEANSHIFT方法

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收稿日期 2008-8-27 修回日期 2008-10-31 网络版发布日期 2010-2-23 接受日期

摘要 根据血细胞图像的特点，采用一种基于改进的MEANSHIFT算法，对血细胞图像的G通道直方图和S分量直方图进行处理，自适应地得到白细胞核和其他区域的分割阈值，通过阈值分割将白细胞核从图像中分割出来，再通过后处理得到白细胞浆区域，从而实现白细胞的自适应阈值分割。在对MEANSHIFT算法进行改进后，阈值的获取自适应性更强，实验证明，这种自适应的阈值分割方法快速、有效，并且对于图像颜色变化、染色条件差异等鲁棒性强。

关键词 图像分割 均值移动 白细胞 直方图

分类号 TP391.4

Improved MEANSHIFT method for blood cell image segmentation

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Abstract

According to the characteristics of blood cells images，the G-channel image histogram and S component histogram of the blood cell image are processed by using a method based on improved MEANSHIFT algorithm，and adaptive segment thresholds the white cells and other regions are obtained.Then，the white cell nucleus will be separated from the image through the threshold segmentation，and the white cell cytoplasm region is obtained by post processing.Adaptive segmentation of the white blood cells is achieved.Experimental results show that this adaptive threshold segmentation method is rapid，efficient and the approach is robust for varied preparation and illumination.

Key words image segmentation mean-shift white blood cell histogram

DOI: 10.3778/j.issn.1002-8331.2010.06.052

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