农田地块图像分割技术研究 Image Segmentation Technology for Field Parcel

陈伊哲 汤修映 彭彦昆 徐杨 李翠玲

中国农业大学

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摘 要： 农田地块图像包含的目标区域多，不同地物间信息相互影响和干扰明显，农田地块图像的分割提取非常困难。利用基于边界和基于区域两种图像分割方法对高空拍摄的农田地块图像进行处理和实验。实验结果表明，利用微分算子的图像边界分割算法虽然能够有效识别出农田地块的边缘，但是对噪声有放大作用；而利用阈值法的图像区域分割算法可以很好地消除农田地块图像的噪声影响。 Field parcel images consist of multiple target regions where different field objects are always interfered each other. As a result, segmentation and feature extraction of the field parcel image are very difficult. Aiming at that, two algorithms based on edge and region were used to process field parcel images photographed by an aerial camera. The results showed that the algorithm of image edge segmentation based on differential operators could effectively detect the edge of the field parcel, but enlarged the noise of image; the algorithm of image region segmentation based on threshold could effectively remove the noise from field parcel image.

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