机器学习

基于ETM+遥感数据的滨海湿地信息提取研究

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摘要　　以江苏省典型滨海湿地为研究对象，利用2005年5月份的Landsat7 ETM+图像数据，在湿地特征及其遥感图像表征分析的基础上，逐步提高湿地信息的提取精度，通过对多光谱遥感图像特征向量的分析，总结出一些湿地信息提取的规则和方法。在滨海湿地光谱特征分析的基础上，首先对研究区的图像进行了非监督分类，进而利用湿地的光谱相应特征、纹理特征、主成分变换、归一化差异水体指数等特征和相应的知识规则，得到用于优化分类的知识规则，采用分层分类的方法对非监督分类的结果进行了优化，从而使提取结果的精度较原来有了很大程度的提高。

关键词　　滨海湿地　非监督分类　知识规则　信息提取

分类号

Study on extraction of coastal wetland using ETM+

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Abstract

In this paper，the coastal wetlands in the northern part of Jiangsu Province are taken as study object and the technology about the extraction of wetland is explored by using multi-features and multi-spectral Landsat 7 ETM+ acquired on May 26，2005，in combination with the analysis upon the spectral feature of wetlands.Based on the analysis of the characteristics of spectrum about the wetland，at first，unsupervised classification on the image of study area is conducted.And then，by using the spectral feature of wetlands，texture，principal component analysis，NDWI and relative knowledge rules，the results of unsupervised classification is improved.

Key words 　coastal wetland　unsupervised classification　knowledge rules　information extraction

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