

عنوان مقاله:

(Investigating and evaluating unsupervised classification methods in extracting land cover and land use (case study: Tehran city

محل انتشار:

سومین کنفرانس بین المللی معماری، عمران، شهرسازی، محیط زیست و افق های هنر اسلامی در بیانیه گام دوم انقلاب (سال: 1402)

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خلاصه مقاله:

The availability of satellite images has led to a new era for remote sensing with applications including land cover mapping and monitoring urban growth and environmental changes. Medium-resolution remote sensing images are one of the best options for studying large areas. Classification methods can be employed to extract information from these images. In the field of remote sensing, classification algorithms are grouped into supervised and unsupervised techniques. By using unsupervised classification, we can solve the problem of gathering training sampling data. This study focuses on the use of K-Means and IsoData unsupervised classification algorithms to classify a medium-resolution Landsat 9 image of Tehran. The accuracy of the classified product was assessed using confusion matrix indexes, overall accuracy, and Kappa. The results show that K-Means method with ۶۸.۳۹% overall accuracy and ۰.۵۷ Kappa coefficient is the optimum choice.

کلمات کلیدی:

Remote sensing, Resolution, Classification, Overall accuracy, Kappa coefficient

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