

عنوان مقاله:

APPLICATION OF A GIS AS A MODELING TOOL FOR REMOTE SENSING IMAGE ANALYSIS OF AGRICULTURAL FIELDS

محل انتشار:

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خلاصه مقاله:

Standard bottom-up classification methods usually concern the pixel as a main element and try to label the pixel individually. But various errors are involved in the image analysis with these methods. Mixed pixels, simplicity of the basic assumptions in the classification algorithms, sensor effects, atmospheric effects, and radiometric overlap of land cover objects lead to the wrong detection in image analysis. In this paper we propose a Model-Based Image Analysis (MBIA) approach to analyze the remotely sensed data. In this manner using the available knowledge about the remote sensing system we generate some hypothesis maps and then test them using the radiometric measurements (images). In order to test the method we used the boundaries of the agricultural fields stored in a GIS to model the objects in the scene. The results of the method have been compared with the result of a traditional Maximum-Likelihood (MLH) classification and a standard Object-Based Classification (OBC) using the boundaries. Using this approach we could reach to the 94% overall accuracy.

کلمات کلیدی:

,Agriculture, Bottom-up, GIS, Remote Sensing, Top-down

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