**عنوان مقاله:**

Using EO1 Hyperspectral images for Geological units mapping

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**خلاصه مقاله:**

The issue of mapping geological units during an evolving process has now reached a point where the detection and classification of geological units is carried out with the aid of hyperspectral sensing. In this study, using hyperspectral image of Hyperion sensor, related to Khorramabad area in Lorestan province, and using Spectral Angle Mapper (SAM) and SVM (Support Vectors Machine) algorithms for detecting and separating geological units After performing the necessary preprocesses, the MNF conversion and PPI algorithm were used to reduce data and extract pure pixels on the image, respectively. From overlapping of pure pixels with geological units and ground data, the average range for Each member was extracted and then these net members are used as inputs for the above mentioned algorithms and class B DVD image was done. Field surveys performed at the points provided by the Spectral Angle Mapter (SVM) confirm the superiority of the SVM method in separating geological units. Finally, by verifying the accuracy of the algorithms by calculating the error matrix, the accuracy of the classification of each method is respectively For SAM (68.83) and SVM (81.70), it was found that at the end of the SVM algorithm with a total accuracy of 81.70 was introduced as the best classification algorithm.

**کلمات کلیدی:**

Hyperspectral Images, Geological Plot Map, Pure Members, SAM, SVM

**لینک ثابت مقاله در پایگاه سیویلیکا:**

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