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# DATA MINING FOR KNOWLEDGE DISCOVERY FROM OBJECT-BASED SEGMENTATION OF VHR REMOTELY SENSED IMAGERY

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Abstract. The success of the object-based image analysis (OBIA) paradigm can be attributed to the fact that regions obtained by means of segmentation process are depicted with a variety of spectral, shape, texture and context characteristics. These representative objectsattributes can be assigned to different land-cover/land-use types by means of two options. The first is to use supervised classifiers such as K-nearest neighbors (KNN) and Support Vector Machine (SVM), the second is to create classification rules. Supervised classifiers perform very well and have generally higher accuracies. However one of their drawbacks is that they provide no explicit knowledge in understandable and interpretable forms. The building of the rule set is generally based on the domain expert knowledge when dealing with a small number of classes and a small number of attributes, but having a dozens of continuously valued attributes attached to each image object makes it a tedious task and experts quickly get overwhelmed and become totally helpless. This is where data mining techniques for knowledge discovering help to understand the hidden relationships between classes and their attached attributes. The aim of this paper is to highlight the benefits of using knowledge discovery and data-mining tools, especially rule induction algorithms for useful and accurate information extraction from high spatial resolution remotely sensed imagery.

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