

A machine learning based approach to remote sensing image classification

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Decision Tree (DT) has been widely used for training and classification of remotely sensed image data due to its capability to generate human interpretable decision rules and its relatively fast speed in training and classification. This paper proposes a Successive Decision Tree (SDT) approach where the samples in the ill-classified branches of a previous resulting decision tree are used to construct a successive decision tree. The decision trees are chained together through pointers and used for classification. The proposed approach is applied to two real remotely sensed image data sets for evaluations in terms of classification accuracy and interpretability of the resulting decision rules.