

# EMPIRICAL COMPARISON OF MACHINE LEARNING ALGORITHMS FOR IMAGE TEXTURE CLASSIFICATION WITH APPLICATION TO VEGETATION MANAGEMENT IN POWER LINE CORRIDORS

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## ABSTRACT:

This paper reports on the empirical comparison of seven machine learning algorithms in texture classification with application to vegetation management in power line corridors. Aiming at classifying tree species in power line corridors, object-based method is employed. Individual tree crowns are segmented as the basic classification units and three classic texture features are extracted as the input to the classification algorithms. Several widely used performance metrics are used to evaluate the classification algorithms. The experimental results demonstrate that the classification performance depends on the performance matrix, the characteristics of datasets and the feature used.

**TOPIC:** Image processing and pattern recognition

**ALTERNATIVE TOPIC:** Image processing and pattern recognition