EXPLORING THE CROPS CLASSIFICATION IN ROMANIA USING SATELLITE IMAGES

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Abstract

Crop classification is of enormous significance for agricultural management. Satellite remote sensing is considered an advanced technology for obtaining crop types on a regional scale, as it can regularly provide large-scale observations of ground objects. The paper aims to debate the problem of crop classification, and the findings can be used in complex commercial applications. Our analysis starts by presenting the progress made in the field of crop classification based on satellite imagery and proposes a general architecture for a crop identification system. The paper also discusses the challenges faced in crop classification, such as the complexity of crop spectra, the influence of environmental factors, and the need for ground truth data for validation. To address these challenges, the paper proposes using a combination of different data sources, including ground observations, meteorological data, and soil information, in addition to satellite imagery. Overall, the paper provides a comprehensive overview of the state-of-the-art techniques and methods used in crop classification based on satellite imagery. The findings of the analysis have significant implications for agricultural management and can be applied in various commercial applications, such as precision agriculture, yield estimation, and land-use planning.

Key words: crop classification, satellite remote sensing, agricultural management, machine learning