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AUTONOMOUS BUILDING DETECTION USING REGION PROPERTIES AND PCA

**Abstract**

This paper proposes an algorithm for autonomous building detection in remote sensing images. The basis of the algorithm relies on the fact that each RGB channel conveys different information. Furthermore, region properties and Principal Component Analysis (PCA) are used to distinguish between buildings and other regions in order to reduce false positive cases. The images that are used to test the proposed algorithm are obtained from DubaiSat-2, which offers multispectral images with 1-m accuracy. The results of the algorithm indicate high accuracy and robustness against shadow effects.