

Satellite Image Processing for Remote Sensing

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Abstract: In this study, image extracted from the satellite sensors are processed for remote sensing. Remote sensing is the science of gathering data about objects or areas from a distance. There are four main processing stages: image pre processing, enhancement, transformation and classification. In pre processing, some distortions need to be corrected before carrying out analysis and post-processing techniques. Radiometric, atmospheric and geometric corrections are one of the most used in satellite image pre processing techniques. There are different methods of satellite image enhancement which includes contrast enhancement, resolution enhancement, edge enhancement, density slicing and digital mosaics. Image transformation stage aims to identify particular feature of earth's surface using PCA and NDVI. Classification is a process of grouping the pixels, that produces effective thematic map of particular land use and land cover. Manual classification by using image interpretation technique requires more time and field experts. So in this paper, it is focused with efficient automatic satellite image classification. Convolutional neural network(CNN) is used for feature extraction and classification of satellite images.

Keywords: Remote Sensing, Classification, Satellite Images, Pre Processing, CNN

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