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NDVI-Based Vegetation Analysis Using Landsat Satellite Imagery in QGIS

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Abstract: *Normalized Difference Vegetation Index (NDVI) is a widely used remote sensing metric for vegetation monitoring and land cover classification. This study demonstrates the use of QGIS, an open-source Geographic Information System, to calculate NDVI using Landsat 8 imagery for a selected area of interest. The approach involves loading satellite bands, performing raster calculations, and visualizing NDVI values to assess vegetation health. The method provides a cost-effective solution for environmental monitoring, agricultural planning, and urban green space analysis.*

Keywords: Remote sensing, Image Processing, QGIS, NDVI

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