

Analysis of High Resolution Multispectral Data Over Urban Areas

Ulligaddala Srinivasa Rao*¹, Dr. K. Suvarna Vani²

*¹Student, Computer Science Department, VR Siddhartha Engineering College, Vijayawada, India

²Professor, Computer Science Department, VR Siddhartha Engineering College, Vijayawada, India

ABSTRACT

The satellite picture are the distinctive highlights of picture generally data are accessible in a satellite picture of that pixel esteems. Presently a days the multispectral pictures are utilized as a part of a remote detecting of information data about a specific picture of question are distinguishing. In a guide the diverse satellite pictures utilized as a part of question are setting e.g., arrive, woods, water and so forth. A satellite picture is a noteworthy wellspring of Google earth information utilizing topographical data framework (GIS). The usage of this paper division process and pre-preparing the strategy. A geospatial information casing of 5×5 km matrix of determination information can be utilized as a part of data about of surface earth information. An approach was conveyed in a satellite picture data is accessible in an open wellspring of earth perception.

Keywords:-Multispectral Data, Land Cover, Satellite Image, Urban Area.

I. INTRODUCTION

The land utilize are arrive cover changes in the distinctive locale of satellite picture are recognizing a some land utilize are arrive secured. A multispectral of satellite picture are utilized as a part of an earth surface of a few highlights are removed in a specific picture information. In the asset of satellite picture investigation instrument GIS as accessible in the regular asset of database. High determination of picture pixel esteems are to enhance a state of picture and for the most part three sorts of pictures are

- 1) large size of picture
- 2) medium size picture
- 3) little size picture are utilized as a part of a pixel esteem little size of question [1].

Image division is to enhance the nature of picture into various protest of picture pixel are recognized in a picture. The accessibility a multiresolution satellite pictures was programmed extraction and distinguishing a question base technique has connected the different information mapping refreshing, arrangement, protest identification acknowledgment. The distinguishing strategy is particularly a urban/rustic land pictures are

identified in this approach. The particular highlights of land cover an unearthly picture of other land e.g. trees, water, shadow pictures are grouping of a change identification technique can decide the issue. Ghostly pictures are each picture pixel question are recognize the change discovery of urban region in light of multispectral picture of moderately a scene of various locales in country/urban territory investigation of chose technique [2]. In a satellite picture are distinctive districts of pictures are accessible in a Google earth information. One of the utilization full to built up the land grouping of geospatial of remote detecting information and geological data system (GIS). The remote detecting to utilize ecological of various contextual analysis and enhance the sort issues in water asset re-enactment of natural issues are insurance. The satellite information was to take care of this issue and gather the information and this sort of issues are can tackle exceptionally troublesome face the remote detecting. Here the one procedures are utilized examination of information accumulate and grouping calculation to utilize this technique. The order calculation are satellite pictures to gathering the distinctive question of picture pixel and number of class are separating the ghostly information pixel. To

grouping calculation are applying a satellite picture information must be satellite sensor are computerized picture level changing distinctive classified investigation master. The grouping of fundamental GIS information give the ideal consequence of not just the exactness acquired but more data are accessible in a characterization procedure [3]. The protest base picture examination process is to expand the picture blunder edge of every pixel increment valuable data are give by the GIS arrive utilize are arrive cover the right question are ID of each picture pixel of right class.

II. METHODS AND MATERIAL

A. Study Area

The study area is Vijayawada city in Andhra Pradesh state of India. When the city records of water body, non forest trees, agriculture land, in a city can find around [7]. The image is gather the longitude from 112 °14'N to 112°20'N and latitude from 28°28'E to 28°32'E. When a availability of satellite image land use land cover area of a elements are rural environment, non forest trees, water body, shadow image, agriculture land . This coverage of land cover different types of landscape in overall ideal for the study.

B. Data Collection

Satellite images is a multispectral image are used to more information are provide the study area can extraction of land data. When a RGB band image are used in a spectral resolution with respectively. The satellite image size is 0×255 resolution image.



Figure 1: Input Satellite Image

C. Land use land cover analysis

This work is help of land use land cover area object base image analysis method are used and K nearest neighbors (KNN) algorithm was applied in a multispectral images. The object in the study area (OBIA) method to identification of normalize difference vegetation index (NDVI), normalized difference water index (NDWI), water index region (WIR), are different classification of land are multispectral satellite images are 0×255 resolution of image of 15th august, 2013 and 2016. Based on the satellite image they are four features are extracted in a satellite data are (1) non forest trees (2) water body (3) agriculture land (4) shadow images.

METHODOLOGY

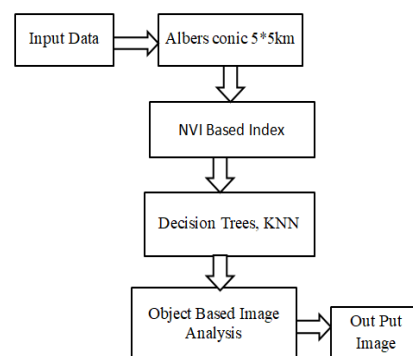


Figure 2: Methodology Block Diagram

III. RESULTS AND DISCUSSION

This result was a study of land cover classification using satellite image is man data source of mapping the regional image. The result to show the classification of and object base method and classification algorithm to achieve the total accuracy is 83.17% of result. Multispectral satellite image are detailed information of object sub class are non-forest trees, water, agriculture land, shadow images and NDVI values of base index of band ratios. In a NDVI band ratios are available in a different values are generated in index.



Figure 3: Trees in city

Figure 4: Agriculture



Figure 5: Waterbodies **Figure 6: Shadow Images**



Figure 7: Water Region Index

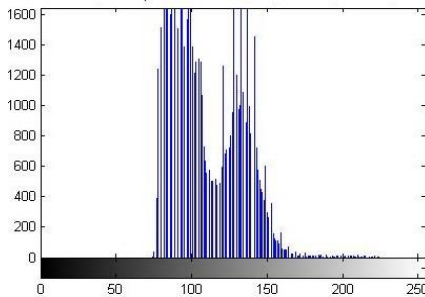


Figure 8: Water Region Index of Histogram

IV.CONCLUSION

The proposed method is useful of a multispectral resolution of global are urban area images. In a classification approach is segment of extraction. Based on the NDVI index of multispectral image are extraction of vegetation of pixel to improve a classification of satellite image help in land map are identification of water body, trees, agriculture land, shadow, are detected. An classification algorithm accuracy 83.0% are generated. The future work is a shape of object and size are generated in a classification algorithm to improve the better result of information.

V. REFERENCES

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