Two Dimensional Legendre Moments and Its Application in Classification of Medical Images

Reviewer 1: --

1. In several sections sentences has spelling and grammar mistakes, which needs to be corrected.
2. In several sections sentences has space problem, which needs to be corrected.
3. Proper sentence construction in several sections to be modified.

| Actual | Suggested |
|--------|-----------|
| abnormal MRI Images. In first step | abnormal MRI Images. In the first step |
| In second stage, two classifiers have been | In the second stage, two classifiers have been |
| was tested on tested with 75 images in which | was tested on tests with 75 images in which |
| remaining 60 are abnormal images. Result | remaining 60 are abnormal images. The result |
| confusion matrix test yielded classification | the confusion matrix test yielded a classification |
| One of the most advantage of using MRI | One of the most advantages of using MRI |
| as its application in medical decision support | as its application in the medical decision support |
| shown that classification of MRI images is | shown that the classification of MRI images is |
| two-level 2D Discreet Wavelet Transform | two-level 2D Discrete Wavelet Transform |
| In last decades, most of the researchers | In the last decades, most of the researchers |
| Polynomials can be used for color images compression | Polynomials can be used for color image compression |
| Legendre moments for gray scale image | Legendre moments for the grayscale image |
| reconstruction abilities as compare to other | reconstruction abilities as compared to other |
| polynomials for classification of electrocardiograms | polynomials for the classification of electrocardiograms |
| Due to motivation of these results presented in above | Due to the motivation of these results presented in the above |
| as features extraction tool and two different | as a features extraction tool and two different |
| Method of feature extraction using Legendre | The method of feature extraction using Legendre |
| other images classification technique. Finally, conclusion | other image classification techniques. Finally, the conclusion of |
| In our hybrid technique, we have used combination | In our hybrid technique, we have used a combination |
| be the space of continues function defined on the | be the space of continuous function defined on the |
| orthogonal in nature and having the properties | orthogonal and having the properties |
| can be express by the following equation as | can be express by the following equation |
| function becomes equal to actual function | function becomes equal to the actual function |
| Basically, any image is 2D array of numerical values | Any image is a 2D array of numerical values |
| of two basis sets. Let’s we have | of two basic sets, Let’s have |
| represented in term of Legendre polynomials as | represented in terms of Legendre polynomials |
| It is very clear from the Figures 2, 3 that 2D Legendre | It is very clear from Figures 2, 3 that 2D Legendre |
| In many image processing applications, features | In many image processing applications, feature |
| these features represents digital image in very | these features represents a digital image in a very |
| array of pixels. Centers of each pixel is \((x_i, t_i)\). Intensity | array of pixels. The centers of each pixel are \((x_i, t_i)\). The intensity |
| in any image can be represented by image intensity | in any image can be represented by the image intensity |
| of infinite series of Legendre polynomials as | of an infinite series of Legendre polynomials |
| Increasing scale level from 45, the polynomials | Increasing the scale level from 45, the polynomials |
| discontinues and they loss the property of boundness | discontinues, and they lose the property of boundness |
| Number of features using scale level can be | The number of features using scale level can be |
| this relation if we use the scale level 45, then total 2025 | this relation, if we use the scale level 45, then a total of 2025 |
| The detail moments for these different four | The detailed moments for these different four |
| The grouping of different images into different group | The grouping of different images into a different group |
| used example of supervised technique. In unsupervised technique | used the example of the supervised technique. In the unsupervised technique |
| In proposed method, we have used Sequential | In the proposed method, we have used Sequential |
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| which are widely used for classification of MRI images | that is widely used for the classification of MRI images |
|-------------------------------------------------------|--------------------------------------------------------|
| There are two types of variable used in this classifier | There are two types of the variable used in this classifier |
| are output of the classifier. Logistic function is | output of the classifier. The logistic function is |
| Logistic function has either zero or one value | The logistic function has either zero or one value |
| used to measure the classification performance | used to measure classification performance |
| consist of following diseases: (a) Glioma, (b) | consist of the following diseases: (a) Glioma, (b) |
| Sample of different abnormal images are | A sample of different abnormal images is |
| total number of correctly and incorrectly | the total number of correctly and incorrectly |
| In confusion matrix Table 1, it can be | In the confusion matrix Table 1, it can be |
| 3.8 clearly indicating the mentioned results | 3.8 indicating the mentioned results |
| that classification accuracy of 100% can be achieved | that the classification accuracy of 100% can be achieved |
| star represents normal images while cross represents | the star represents normal images while the cross represents |
| have very different pattern as compare to abnormal | have a very different pattern as compare to abnormal |
| It is clear that our proposed method earns the highest | Our proposed method earns the highest |

Comments to Editor:

1. After modifying the content, paper can be accepted for possible publication.

https://www.journalimcms.org/
Reviewer 2: --

1. Paper should be written in JMCMS Journal format.
2. References and in-text citations are not in JMCMS format. More references should be included and sequentially/adequately arranged, as cited in the text.
3. In many places, sentences are started with abbreviations. When it is introduced for the first time, the full form should be given.
4. Authors need to Modify Abstract and conclusion more appropriately.
5. In section three, sentences end with few numbers of the full stop, which needs to be removed.
6. Conflict of interest regarding article should be mention in the text.

Comments to Editor:

1. After modifying the content, paper can be accepted for possible publication.
Reviewer 3: --

1. Paper should be written in JMCMS Journal format.
2. References and in-text citations are not in JMCMS format. More references should be included and sequentially/adequately arranged, as cited in the text.
3. Authors need to describe the literature survey in introduction section more elaborately
4. The Abstract and conclusion are needed to be Modified in accordance to fulfill the paper aim.
5. Conflict of interest regarding article should be mention in the text.

Comments to Editor:

1. After modifying the content, paper can be accepted for possible publication.

Regards
Editorial Manager

[Note: This is a computer-generated Report hence, no need of any Signature.]