searching ability the images will be retrieved and depending on the best performance the images will be retrieved.

5.1. Manhattan Distance

The Manhattan distance function computes the distance that would be traveled to get from one data point to the other if a grid-like path is followed. The Manhattan distance between two items is the sum of the differences of their corresponding components

Let us take, a=(U1,V1) and b=(U2,V2) are the two points, then the Manhattan Distance between a and b is given by-
MH(a,b) = |U1-U2| + |V1-V2|

Instead of 2-Didensions, if the points have n-dimensions, each as p = (U1,U2,U3,….,Un) and b = (V1,V2,V3,…,Vn) then by defining the Manhattan distance between p and q –
MH(p,q)=|U1-V1| + |U2-V2| + …. + |Un-Vn|
MH(p,q)= ∑ |U-V|.

5.2. Euclidean Distance

The Euclidean or Euclidean metric is the "ordinary" distance between two points in Euclidean space. With this distance, Euclidean space becomes a metric space.

The Euclidean distance between points **p** and **q** is the length of the line segment connecting them ($\overline{\mathbf{pq}}$).In Cartesian coordinates, if **p** = (p_1, p_2,..., p_n) and **q** = (q_1, q_2,..., q_n) are two points in Euclidean *n*-space, then the distance (d) from **p** to **q**, or from **q** to **p** is given by the Pythagorean formula:

$$d(\mathbf{p},\mathbf{q}) = d(\mathbf{q},\mathbf{p}) = \sqrt{(q_1-p_1)^2 + (q_2-p_2)^2 + \cdots + (q_n-p_n)^2}$$

$$= \sqrt{\sum_{i=1}^{n}(q_i-p_i)^2}.$$

6. Testing and Evaluation

Some features are dependent on the properties of the image, such as mean, median and standard deviation, where:

Mean: Average or treats the columns of the image as vectors, then returning a row vector of mean values.
Median: Treats the columns of the image as vectors, then, returning a row vector of median values.
Standard deviation ( ): Standard deviation of the pixels of each column of the image matrix then returning a row vector containing standard deviation. The figure below showing the results for the proposed system when applied on one of the test image as a model, also tables showing the results measured for the proposed system:

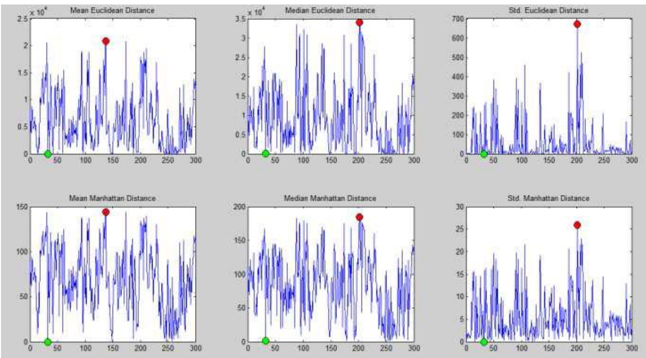

Figure 2: Mean, median, standard deviation of the Euclidian and Manhattan distance.

Table 1: Shows the similarity measure for both Euclidean & Manhattan distance based on Mean, Median and Standard Deviation

Features test image (1-30)	Mean		Median		Std.	
	Eclud.	Manh.	Eclud.	Manh.	Eclud.	Manh.
Rate of matching	100%	100%	13%	13%	100%	100%

Table1 shows the similarity measure for both Euclidean and Manhattan distance the rate of matching is 100% based on the mean and standard deviation have maximum average value so they are good for image retrieval and the images are retrieved for Euclidean, Manhattan distance.

7. Conclusion

As a conclusion, CBIR using the proposed technique shows that it uses four different feature extraction to retrieve medical images and for measuring the feature vectors, similarity measurements – Euclidean and Manhattan metrics are being used and gives almost the same high performance while comparing with the properties of the image. Hence, they are good for image retrieval in order to retrieve relevant images either of the distance metrics can be used depending on the users need.

8. Future Scope

The future work includes for similarity measurement by using another method of distance measurement like standardized Euclidean distance and Normalized Euclidean distance metrics.

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