

**CSE3018 CONTENT BASED IMAGE AND VIDEO RETRIEVAL LAB**  
**EXERCISE - 11**

**DATE: 10.11.2021**

**DISTANCE & SIMILARITY METRIC**

Choose any one feature dataset that you have obtained in any of the previous experiments.

1. Implement the following Distance Measure / Similarity Measure (Write each of them as an individual Matlab file ; Call them from the Main Function)
  - a. Euclidean
  - b. Squared Euclidean
  - c. Standardized Euclidean
  - d. Mahalanobis
  - e. City Block Distance
  - f. Minkowski Distance
  - g. Chebychev
  - h. Cosine Distance
  - i. Correlation Distance
  - j. Hamming Distance
  - k. Jaccard Distance
  - l. Spearman Distance
2. Compare 2 histograms using the following distance:
  - a. Histogram intersection
  - b. Kullback-Leiber Divergence and Jeffrey Divergence
  - c. Chi-Square Distance
  - d. Hamming Distance
  - e. Earth Movers Distance
  - f. Pearson Correlation Coefficient
3. Index the records based on the metric values.

Note:

Submission Content:

1. Code
2. Output Screen Shots
3. Excel File containing the Index/Rank for each record (The last column filled in )
4. Definition and explanation for each of these distance metrics – meaning, when to use etc.

Name your file as Reg. No \_ E3.doc eg., 16BCE1111\_E3.doc

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References :

- <https://www.cs.cmu.edu/~efros/courses/LBMV07/Papers/rubner-jcviu-00.pdf>
- <https://in.mathworks.com/help/stats/pdist.html>
- <https://in.mathworks.com/help/stats/pdist2.html>