**CS412 Assignment #1**

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QUESTION 1

1. Max = 100, Min = 26.
2. Q1 = 65, Q2 = 74, Q3 = 83
3. Mean = 73.698
4. Mode = 78
5. Variance = 175.939
6. Consistent with empirical formula = 0

QUESTION 2

1. Before normalization, variance = 116.111
2. After normalization, variance = 1.0
3. Corresponding score for 90 after normalization = 0.241

QUESTION 3

1. Pearson’s coefficient = 0.710
2. Covariance = 101.601

QUESTION 4

1. Jaccard coefficient = 0.682
2. H=1, Minkowski Distance = 6073
3. H=2, Minkowski Distance = 708.615
4. H= inf, Minkoeski Distance = 170
5. Cosine Similarity = 0.844
6. Kullback-Leibler Divergence = 0.204

QUESTION 5

1. Chi-square Correlation = 23593.796