

Dialogue Classifying

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1 Measures

1.1 Cosine Distance

$$cs(P, Q) = \frac{\sum_{i=1}^n p_i q_i}{\sqrt{\sum_{i=1}^n p_i^2 \sum_{i=1}^n q_i^2}} \quad (1)$$

$$cd(P, Q) = 1 - cs(P, Q) \quad (2)$$

1.2 Kullback-Leibler Divergence

$$kl(P, Q) = \sum_{i=1}^n q_i \ln \left(\frac{q_i}{p_i} \right) \quad (3)$$

1.3 Mean Kullback-Leibler Distance

$$mkl(P, Q) = \frac{kl(P, Q) * kl(Q, P)}{2} \quad (4)$$

1.4 Symmetric Kullback-Leibler Distance

$$skl(P, Q) = \sum_{n=1}^n (p_i - q_i) * \ln \left(\frac{p_i}{q_i} \right) \quad (5)$$

1.5 Jensen Difference Divergence

$$j(P, Q) = \sum_{i=1}^n \frac{p_i \ln(p_i) + q_i \ln(q_i)}{2} - \frac{p_i + q_i}{2} * \ln \left(\frac{p_i + q_i}{2} \right) \quad (6)$$