Pondération:

$$d_k = q_k = tf(k, d) \cdot \log \frac{N}{df(k)}$$

Inner Product (Dot Product):

$$Sim(\vec{d}, \vec{q}) = \vec{d} \cdot \vec{q} = \sum_{k=1}^{n} d_k \cdot d_k$$

Cosine Similarity:

$$Sim(\vec{d}, \vec{q}) = \frac{\vec{d} \cdot \vec{q}}{\|\vec{d}\| \cdot \|\vec{q}\|} = \frac{\sum_{k=1}^{n} d_k \cdot d_k}{\sqrt{\sum_{k=1}^{n} (d_k)^2} \cdot \sqrt{\sum_{k=1}^{n} (q_k)^2}}$$

Jaccard Similarity:

$$\text{Jaccard Similarity}(A, B) = \frac{|A \cap B|}{|A \cup B|}$$

Dice Similarity:

$$\text{Dice Similarity}(A, B) = \frac{2|A \cap B|}{|A| + |B|}$$

Proba:

$$\text{Cosine Similarity}(P, Q) = \frac{\sum_i P(i) \cdot Q(i)}{\sqrt{\sum_i P(i)^2} \cdot \sqrt{\sum_i Q(i)^2}}$$

$$Sim(d_j, q) = \left\{ \begin{array}{ll} 1 & q \in d_j \\ 0 & sinon \end{array} \right.$$