2016302580320-任思远-第八次作业

7.7

$$
\begin{aligned}
\sigma(\underset{\sim}{A}, \underset{\sim}{B}) &= \frac{1 + \underset{\sim}{A} \bullet \underset{\sim}{B} - \underset{\sim}{A} \odot \underset{\sim}{B}}{2} \\
&= \frac{1 + 0.8 - 0.6}{2} \\
&= 0.6
\end{aligned}
$$

7.9

Hamming 距离

$$
\begin{aligned}
d_H(\underset{\sim}{A}, \underset{\sim}{B_1}) &= \sum_{i=1}^{4} |\mu_{\underset{\sim}{A}}(x_i) - \mu_{\underset{\sim}{B_1}}(x_i)| \\
&= 0.6 \\
d_H(\underset{\sim}{A}, \underset{\sim}{B_2}) &= \sum_{i=1}^{4} |\mu_{\underset{\sim}{A}}(x_i) - \mu_{\underset{\sim}{B_2}}(x_i)| \\
&= 0.2
\end{aligned}
$$

于是 $\underset{\sim}{A}$ 与 $\underset{\sim}{B_2}$ 更近。

Hamming 贴仅度

$$
\begin{aligned}
\sigma_H(\underset{\sim}{A}, \underset{\sim}{B_1}) &= 1 - \frac{1}{4}\sum_{i=1}^{4} |\mu_{\underset{\sim}{A}}(x_i) - \mu_{\underset{\sim}{B_1}}(x_i)| \\
&= 0.85 \\
\sigma_H(\underset{\sim}{A}, \underset{\sim}{B_2}) &= 1 - \frac{1}{4}\sum_{i=1}^{4} |\mu_{\underset{\sim}{A}}(x_i) - \mu_{\underset{\sim}{B_2}}(x_i)| \\
&= 0.95
\end{aligned}
$$

于是 $\underset{\sim}{A}$ 与 $\underset{\sim}{B_2}$ 更近。