

$$E(\theta, \sigma^2) = - \sum_n \log_2 \sum_m \frac{\frac{1}{\|y\|} 1}{(2\sigma^2)} \exp\left(-\frac{\|x_n - y_m\|_2^2}{(2\sigma^2)}\right) + \frac{1}{\|x\|}$$

where

- $x_i \in \mathbb{R}^2$
- $y_j \in \mathbb{R}^2$
- $\sigma \in \mathbb{R}$