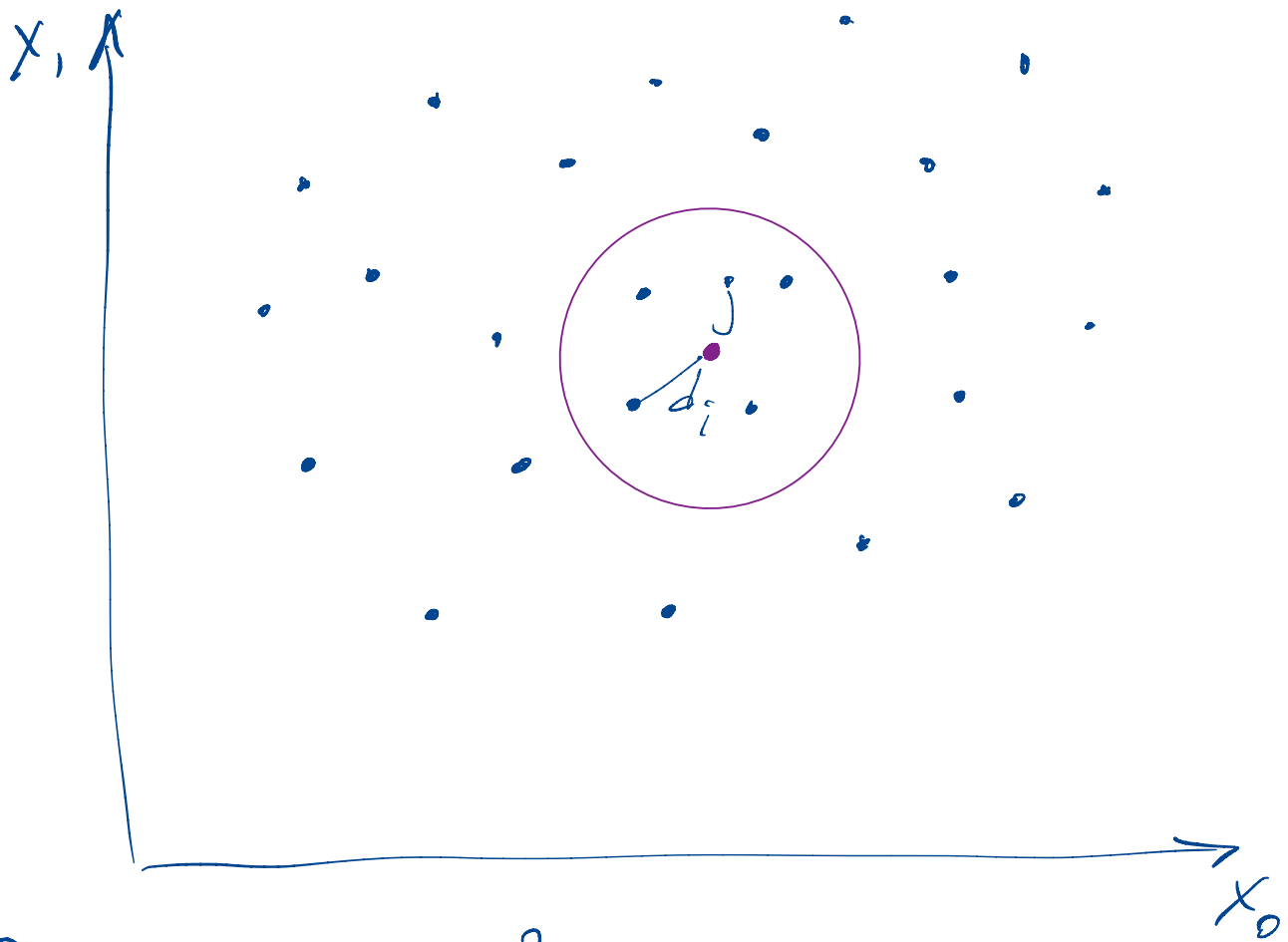


k NN (k nearest neighbours)



$$\mathcal{T} = \{x_i, y_i\}$$

K

$$\mathcal{T}_j = \{\tilde{x}_i; \hat{y}_i\}$$

$$\hat{y}_j = \sum_{i=1}^K \tilde{y}_i$$

Пересечение:

$$\hat{y}_j = \frac{1}{K} \sum_{i=1}^K \hat{y}_i$$

$$\hat{y}_j = \sum_{i=1}^K w_{ij} \hat{y}_i$$

K классификация

$$\hat{y} = \text{Простое голосование}$$

$$d_{ij} = \sqrt{(x_{o_i} - x_{o_j})^2 + (x_{i_1} - x_{j_1})^2 + \dots}$$

$$w_{ij} \sim \frac{1}{d^2}$$

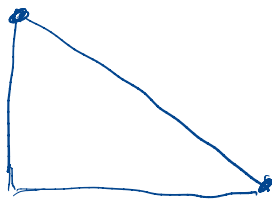
$$w_{ij} = \frac{\left(\frac{1}{d_{ij}}\right)^2}{\sum_{i=1}^K \left(\frac{1}{d_{ij}}\right)^2}$$

Классификация

$$S_{kj} = \sum_{i=1}^K w_{ij} [\tilde{y}_i = k]$$

$$\hat{y} = \arg \max_k S_{kj}$$

x_1



$$d^{(m)} = \sqrt[m]{(x_{o_i} - x_{o_j})^m + \dots}$$

x_0