

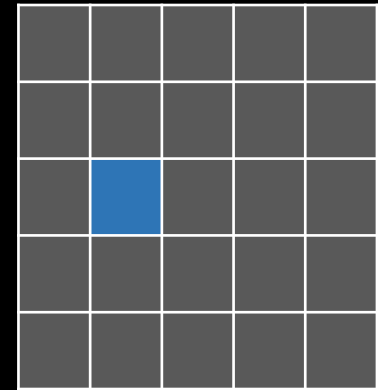
# Attempt in Clustering

# Details

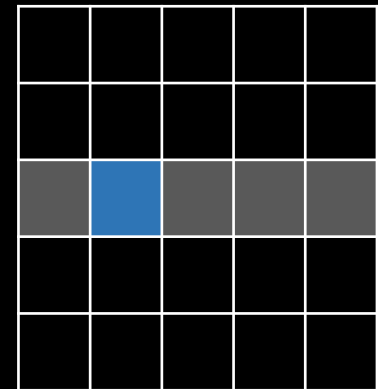
- Normalize (flatten) feature vectors
  - Joint probability distribution
  - Conditional probability distribution

$$P_y(i_1, i_2) = \frac{M_{i_1, i_2}^y}{\sum_{i,j} M_{i,j}^y}, \quad P_y(i_2 | i_1) = \frac{M_{i_1, i_2}^y}{\sum_j M_{i_1, j}^y}.$$

- Euclidean norm = Frobenious norm
  - a well-defined distance measure



Joint probability distribution



Conditional probability distribution