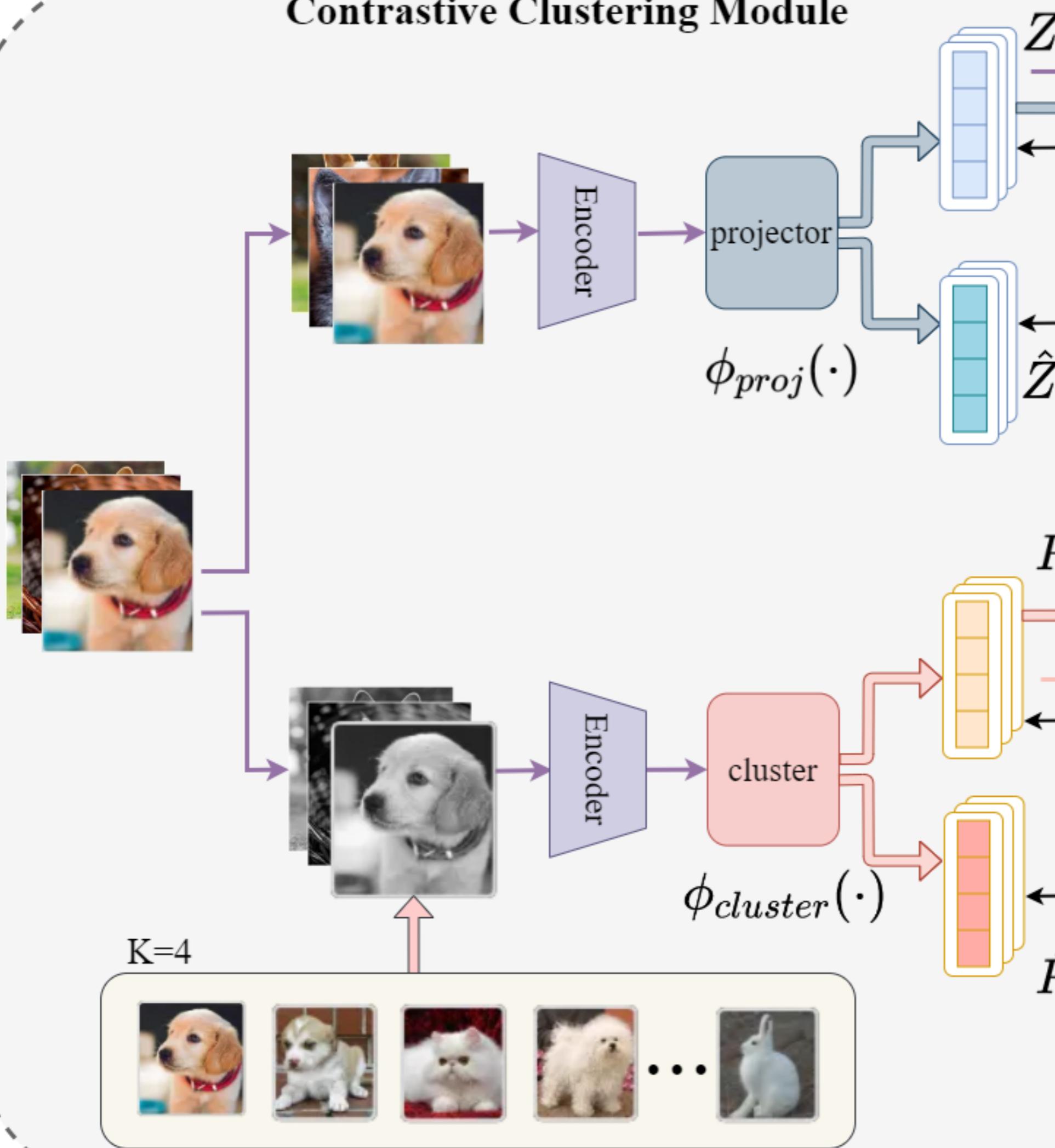
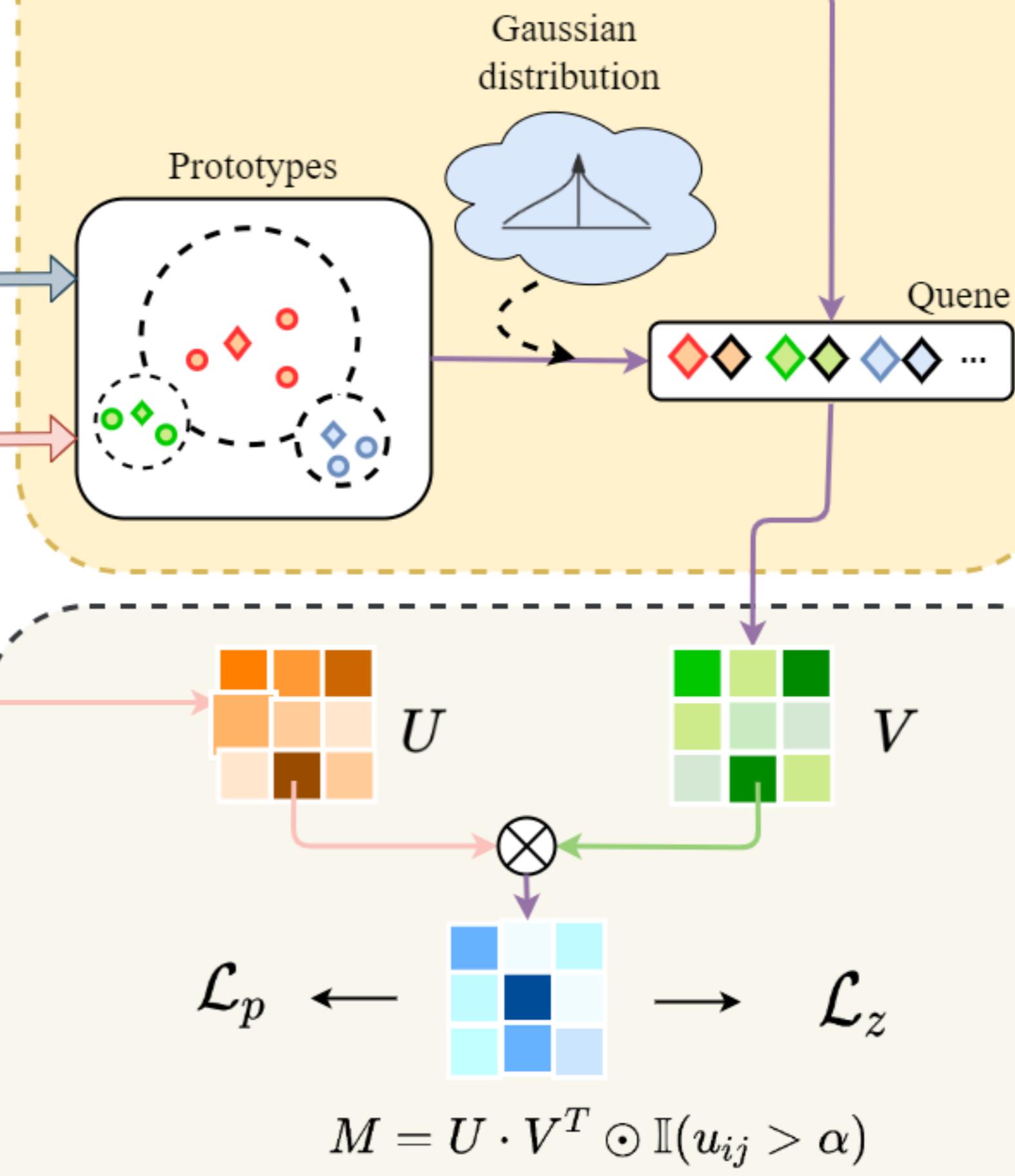


Contrastive Clustering Module



Prototypes Generation Module



Similarity Relationship Construction Module

$$\mathcal{L}_p \leftarrow \quad \longrightarrow \quad \mathcal{L}_z$$

$$M = U \cdot V^T \odot \mathbb{I}(u_{ij} > \alpha)$$

$$V$$

$$U$$

$$\mathcal{L}_p$$

$$\phi_{cluster}(\cdot)$$

$$\hat{P}$$

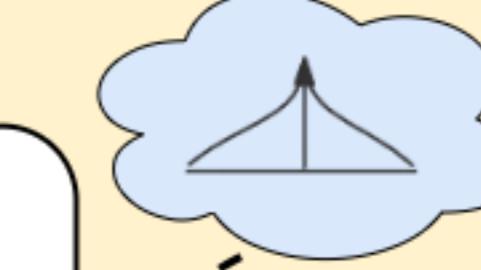
$$P$$

$$\phi_{proj}(\cdot)$$

$$Z$$

$$\hat{Z}$$

Gaussian distribution



Queue

$$K=4$$

