

Affinity Matrix Set: \mathbf{A}^k

Distance Matrix Set: \mathbf{D}^k

Pixel Density: $\vec{\gamma}$

Penalized Objective
Function:

$$\Phi(\vec{m}) :=$$
$$\vec{m}^T \mathbf{A}^k \vec{m} + (\gamma^T \mathbf{D}^k)^T \vec{m}$$

Such that: $0 \leq m_i \leq 1$