Report K-Means

No. iterations – 10
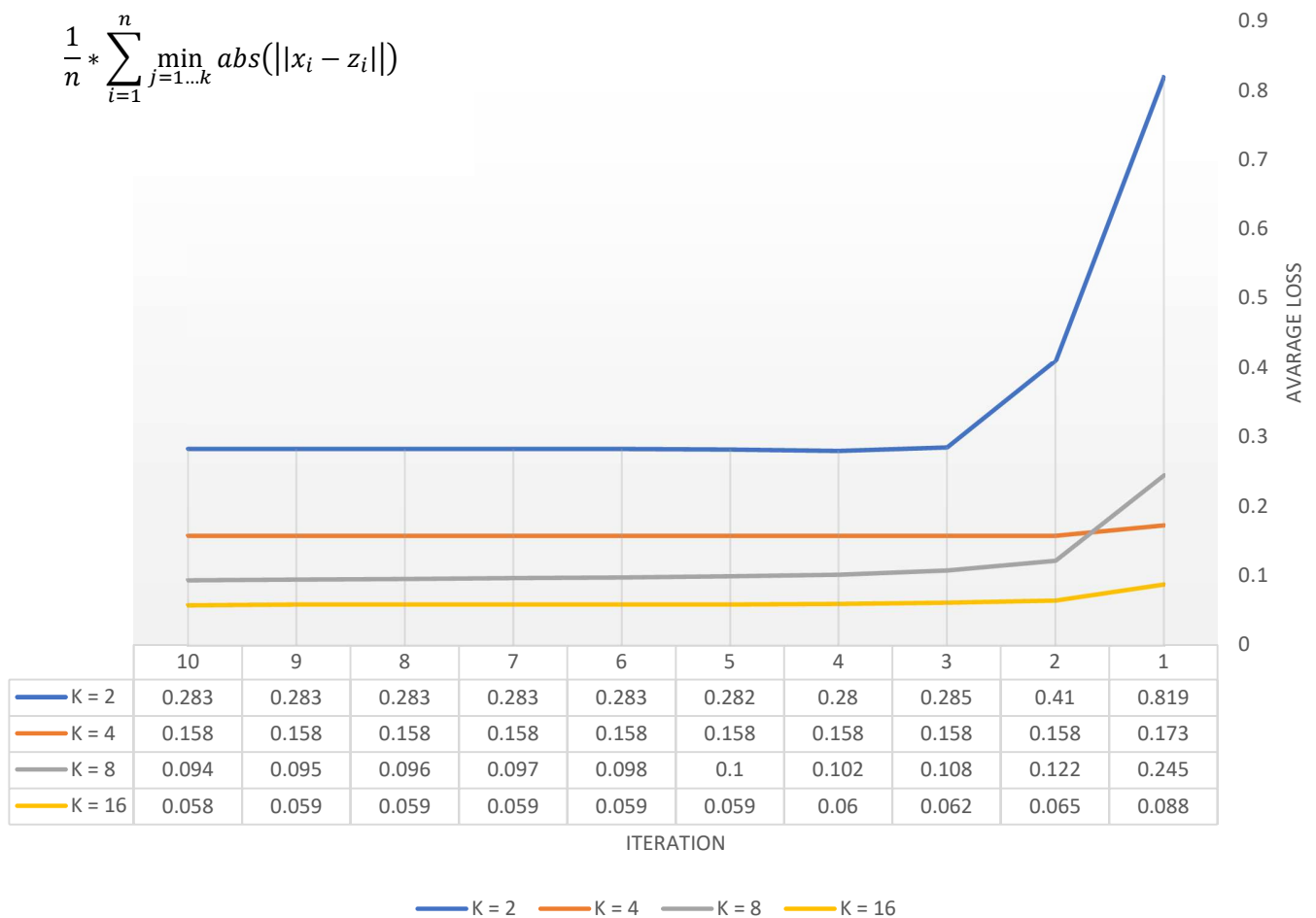
Centroids was given to us

Graph for loss

Average Loss Function
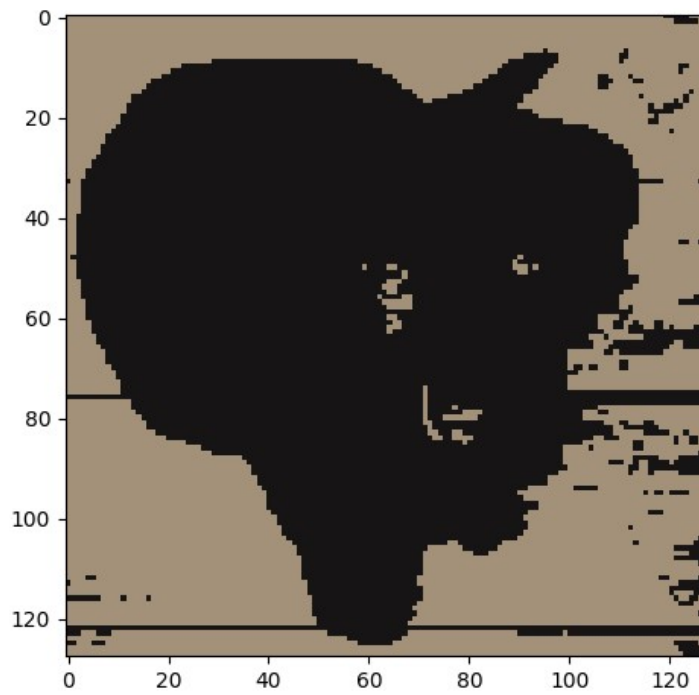
Loss Plot

$$\frac{1}{n} * \sum_{i=1}^{n} \min_{j=1...k} abs(||x_i - z_i||)$$

	10	9	8	7	6	5	4	3	2	1
K = 2	0.283	0.283	0.283	0.283	0.283	0.282	0.28	0.285	0.41	0.819
K = 4	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.173
K = 8	0.094	0.095	0.096	0.097	0.098	0.1	0.102	0.108	0.122	0.245
K = 16	0.058	0.059	0.059	0.059	0.059	0.059	0.06	0.062	0.065	0.088

ITERATION

AVARAGE LOSS
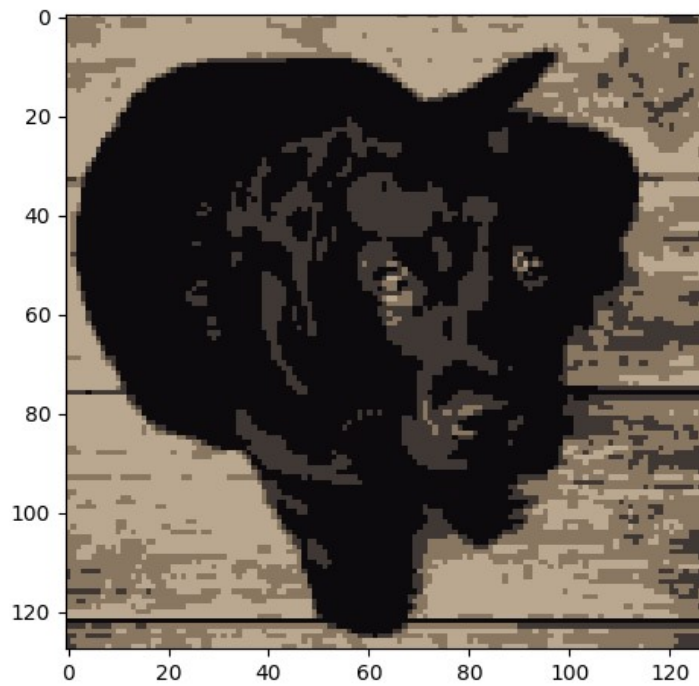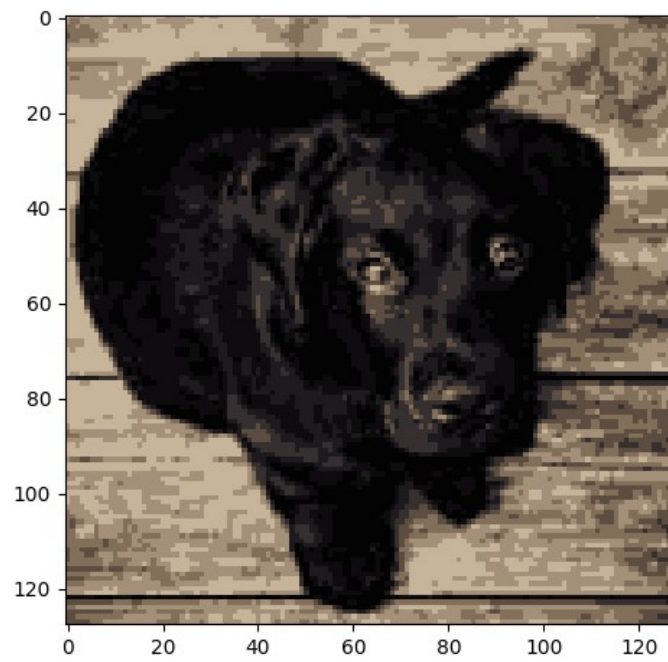
K = 2   K = 4   K = 8   K = 16

Compressed Images

K = 2:

K = 4:

K = 8:

K = 16: