K-Means

1. Randomly initialize parameters $\theta = \{\mu_1, \ldots, \mu_C\}$
2. Until convergence repeat:

   a) For each point compute closest centroid

$$c_i = \arg\min_c \|x_i - \mu_c\|^2$$

   b) Update centroids

$$\mu_c = \frac{\sum_{i:c_i=c} x_i}{\#\{i : c_i = c\}}$$