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Kmean Algo:

It have 2 steps:

(i) It will go with every examples & assigned them to the cluster centroids which is more closer to them. (Clus assign step)

(ii) We will cal. mean of loc. of all clusters pts say red cluster pts & assign that mean loc to the red cluster centroid. (Mfy will be done to other cluster centroids (centroid step)

We will repeat these two steps until & we get get same concurrent centroids of clusters

Algo:

(1) Randomly initialize K cluster centroids $\mu_1, \mu_2, \mu_3 \ldots \mu_K \in \mathbb{R}^n$

(2) Repeat {

(i) { for i=1 to m
$c^{(i)}$ = index (from 1 to K) of cluster centroid closest to $x^{(i)}$
$\min \|x^{(i)} - \mu_K\|^2$

(ii) { for k=1 to K
μ_k = avg (mean) of pts assigned to cluster k