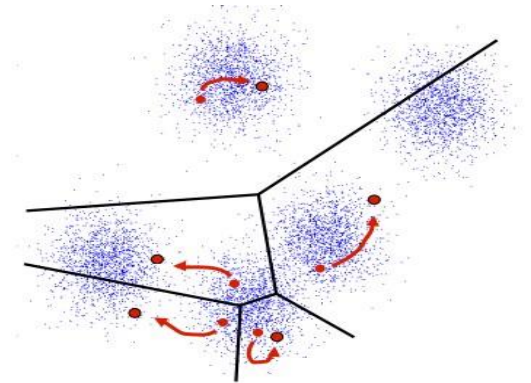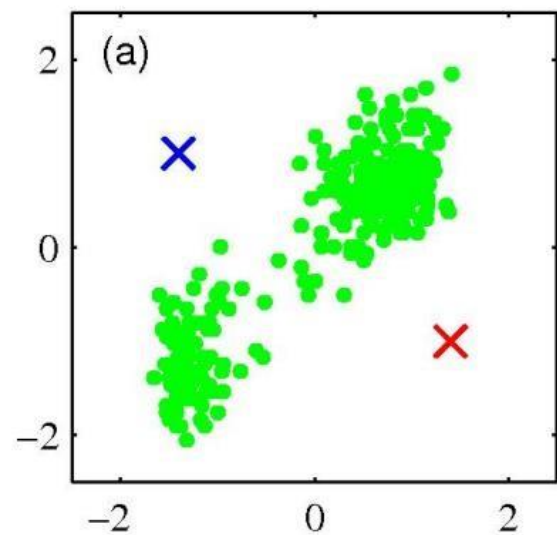# K-Means

• An iterative clustering algorithm

– Initialize: Pick K random points as cluster centers –

Alternate:

1. Assign data points to closest cluster center

2. Change the cluster center to the average of its assigned
   points

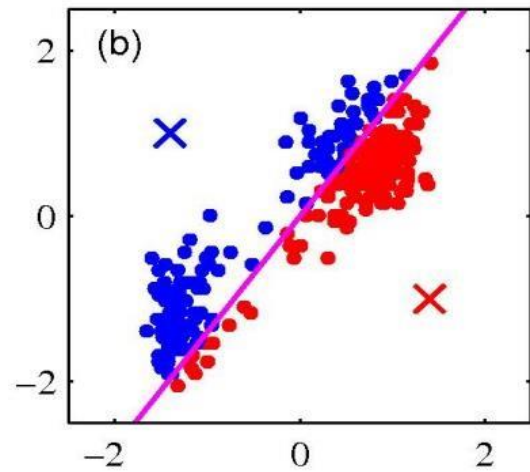– Stop when no points' assignments change

K means clustering: Example

• Pick K random points as cluster centers (means)
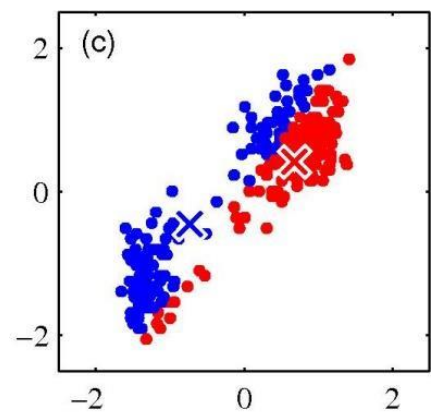
Shown here for K=2

Iterative Step 1

• Assign data points to closest cluster center

Iterative Step 2

• Change the cluster center to the average of the assigned
  points

• Repeat until convergence