

Riconoscimento e Recupero dell'Informazione per Bioinformatica

LAB. 9 – K-means clustering

Pietro Lovato

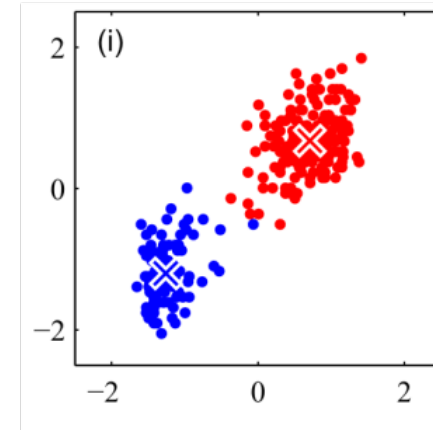
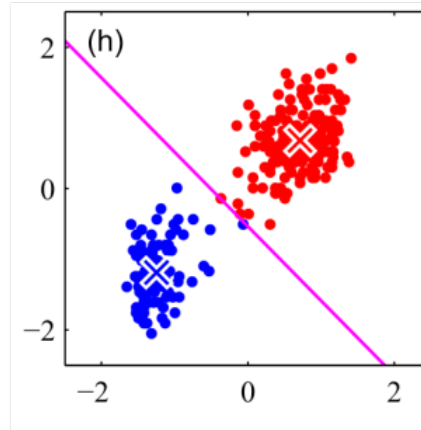
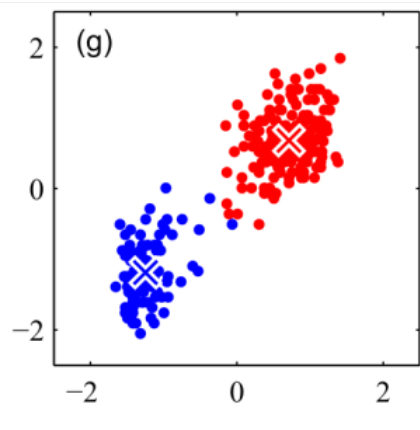
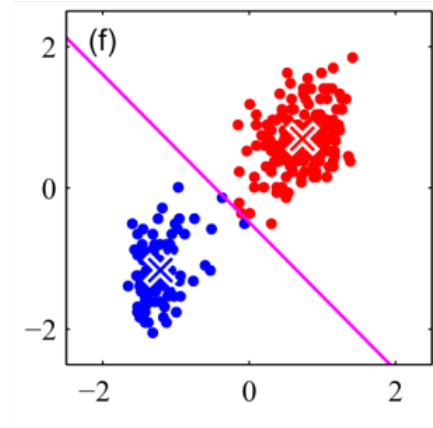
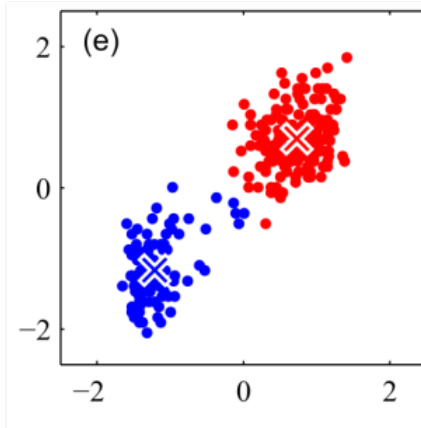
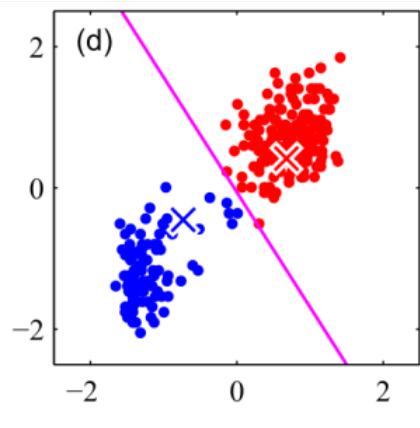
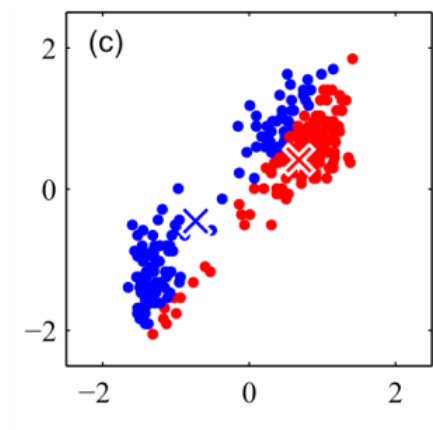
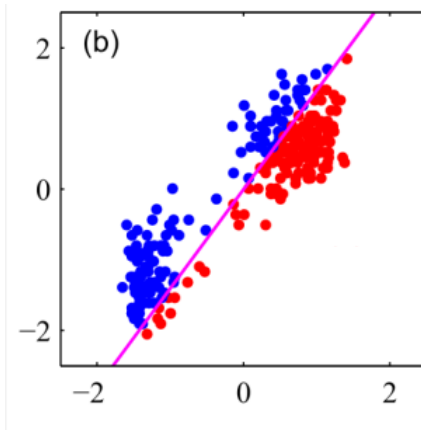
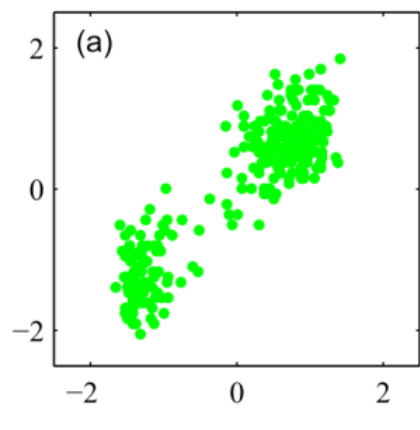
Corso di Laurea in Bioinformatica
Dip. di Informatica – Università di Verona
A.A. 2016/2017

K-means: in teoria

Idee:

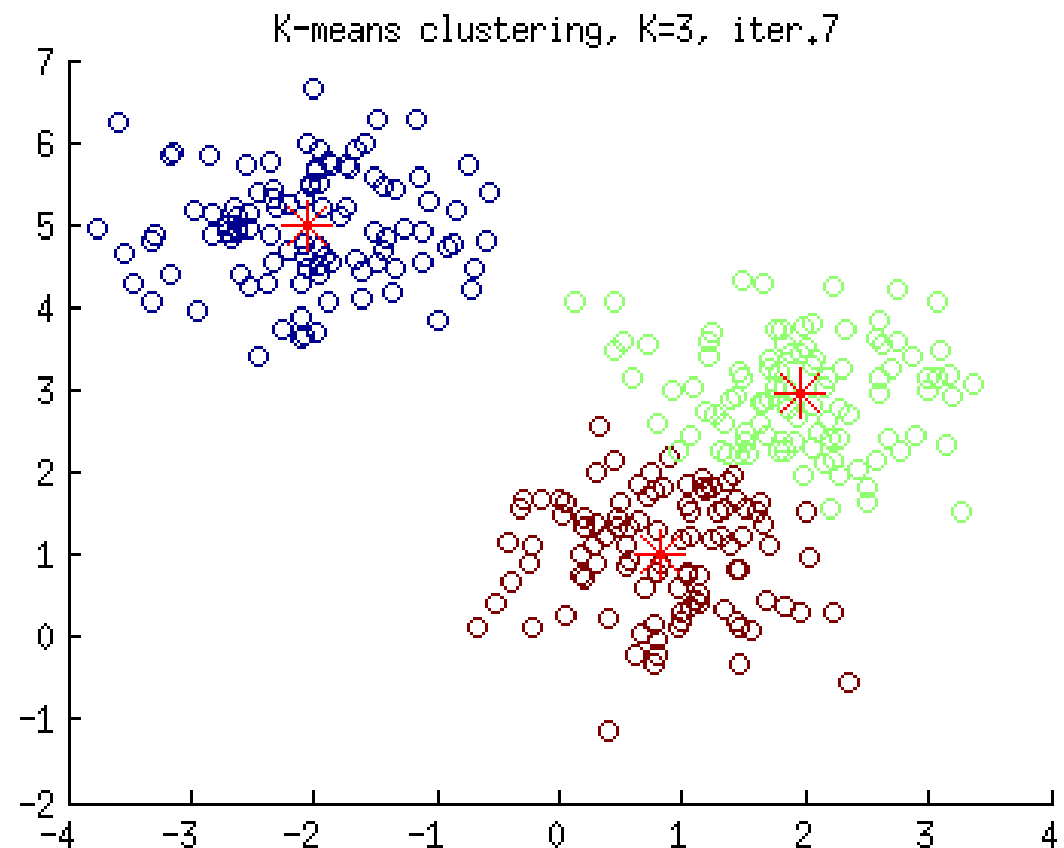
- Ogni cluster è rappresentato dalla media dei punti che ne fanno parte
- Si parte da una clusterizzazione iniziale, e ad ogni iterazione si assegna ogni pattern alla media più vicina
- Si riaggiornano le medie
- Si continua fino a convergenza

K-means: in teoria



Esercizio 1

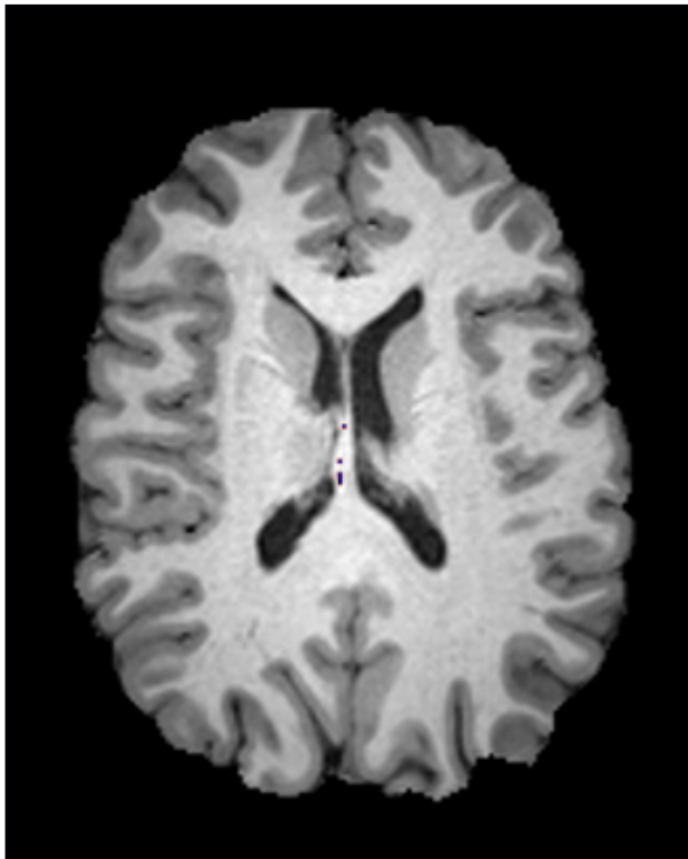
- Implementare l'algoritmo kmeans seguendo le linee guida contenute nello script “Lezione9Lab.m”



Esercizio 2

- Clusterizzare con l'algoritmo kmeans appena implementato i pixel dell'immagine "T1.png"

Immagine originale



K-means clustering, K=3, iter.8

