

Mohamad Nabih Alkhateeb

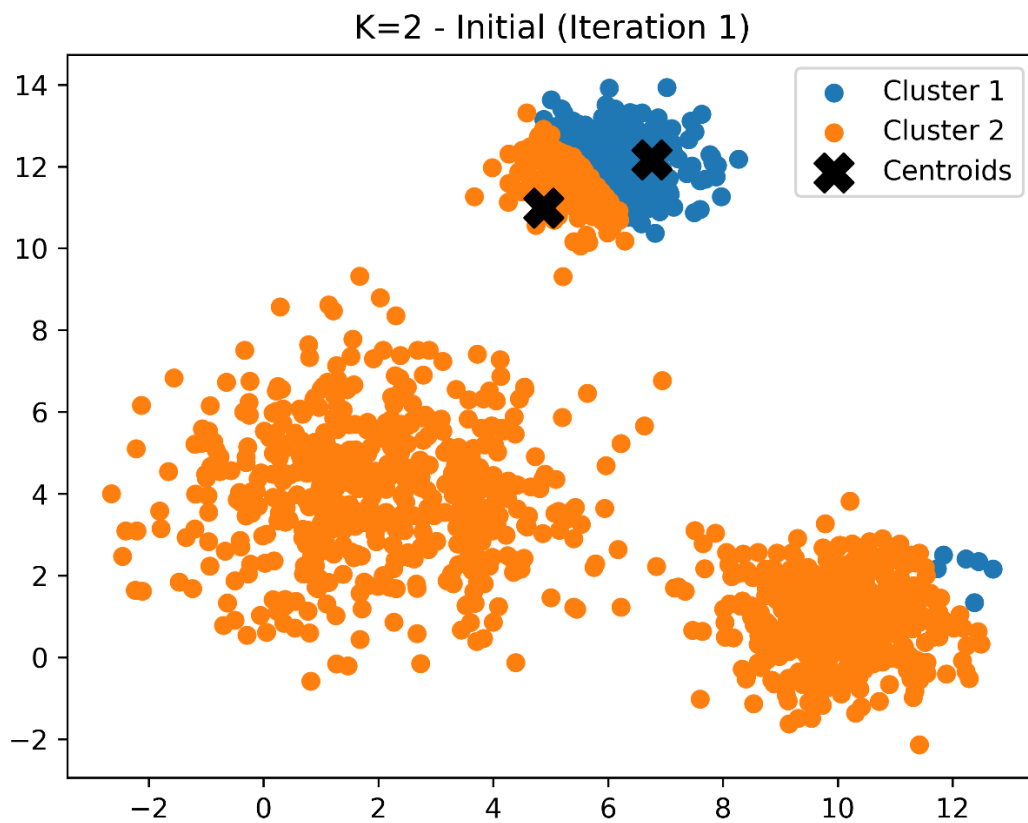
#1002170786

Visual outputs

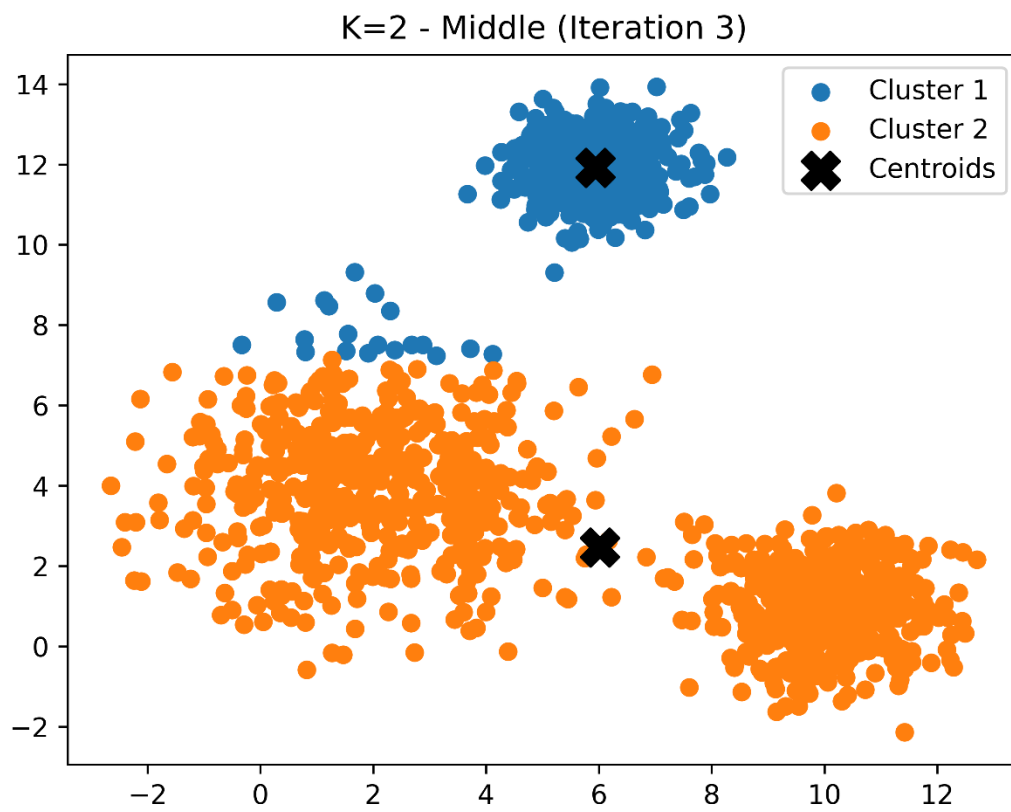
For KMeans.py:

- ***For K = 2 (default):***

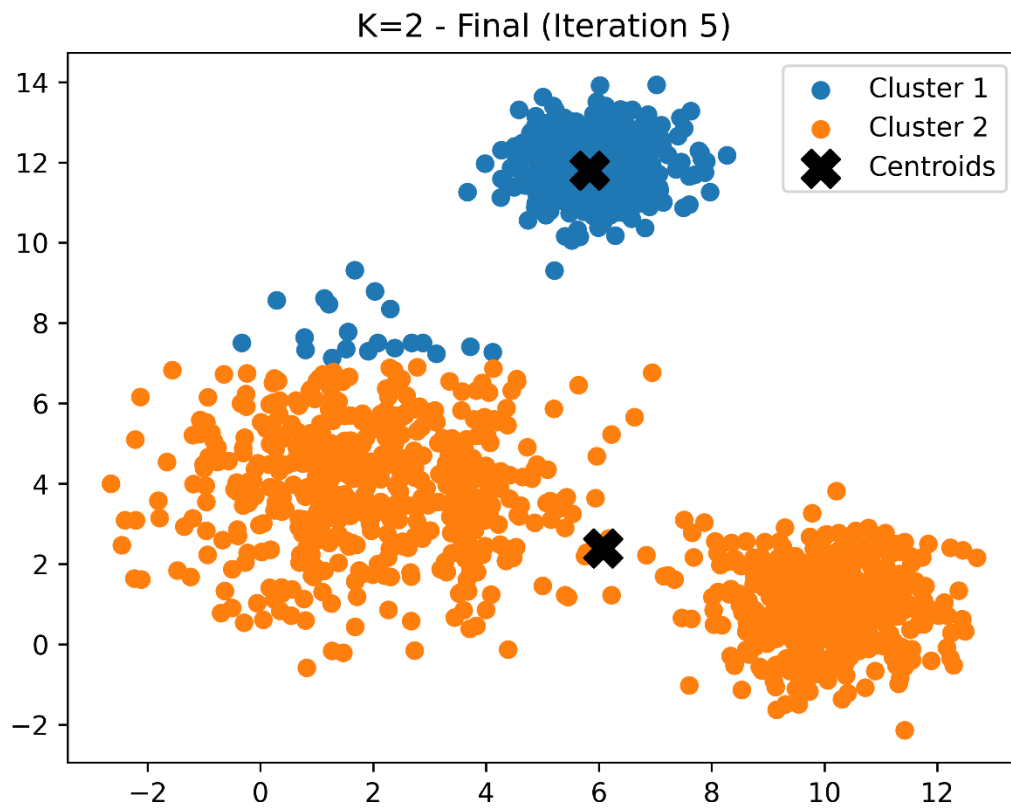
Initial Iteration:



Middle Iteration:

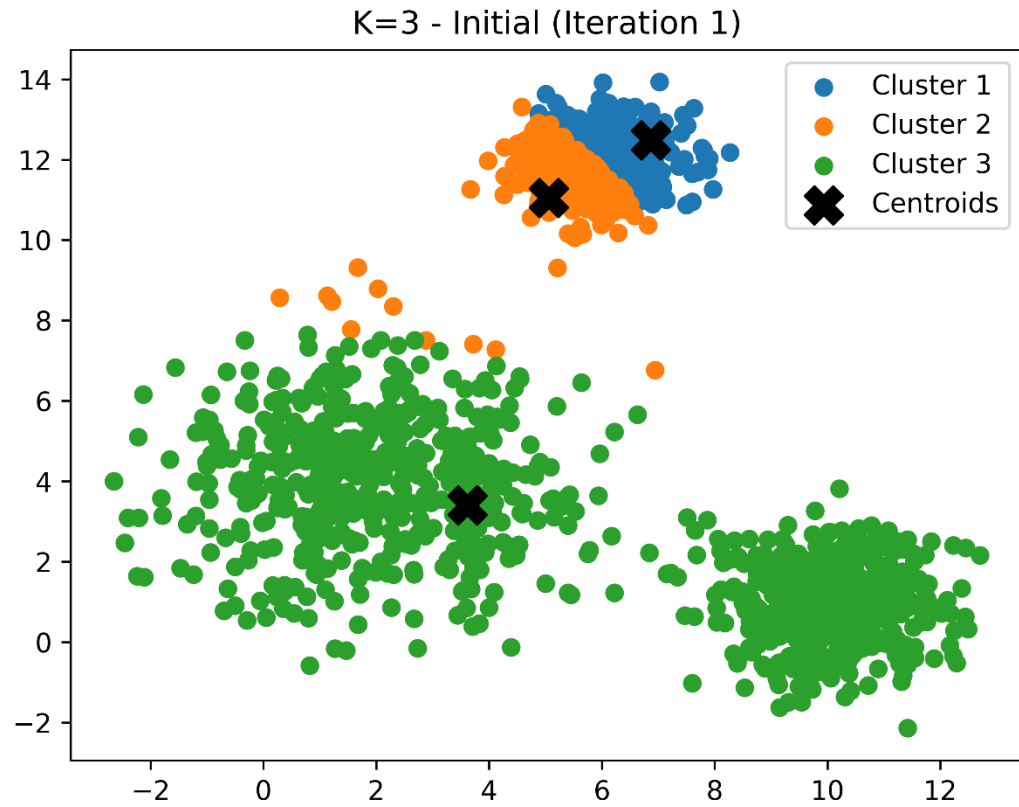


Final Iteration:

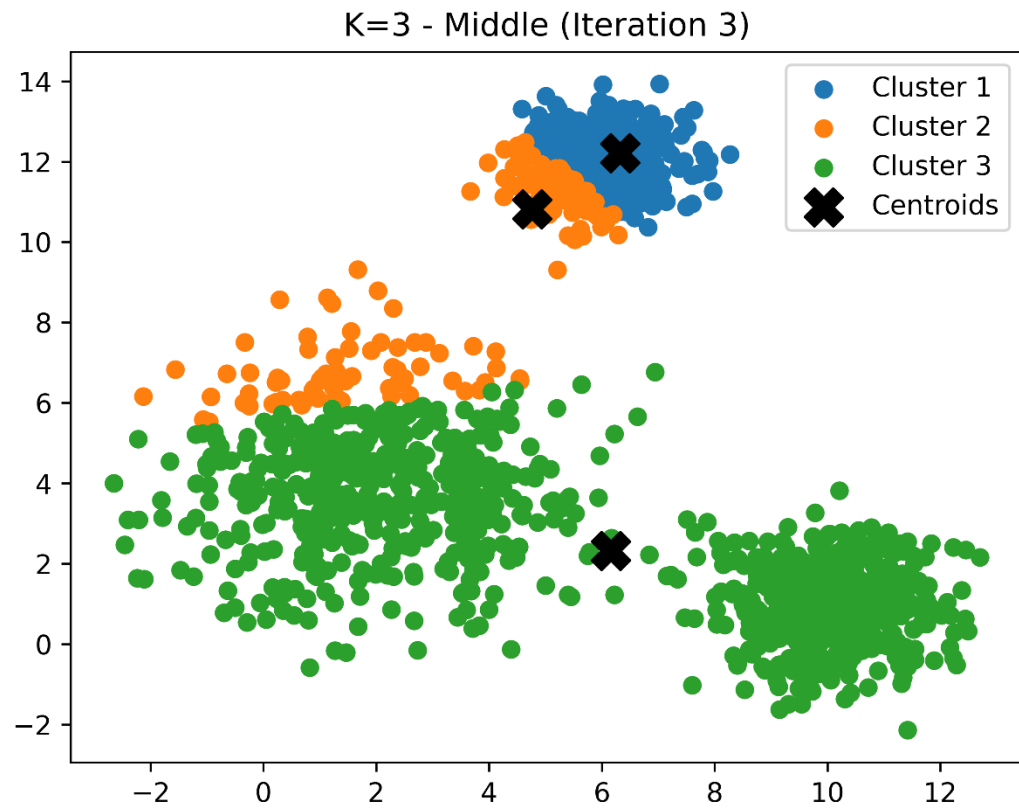


- **For $K=3$:**

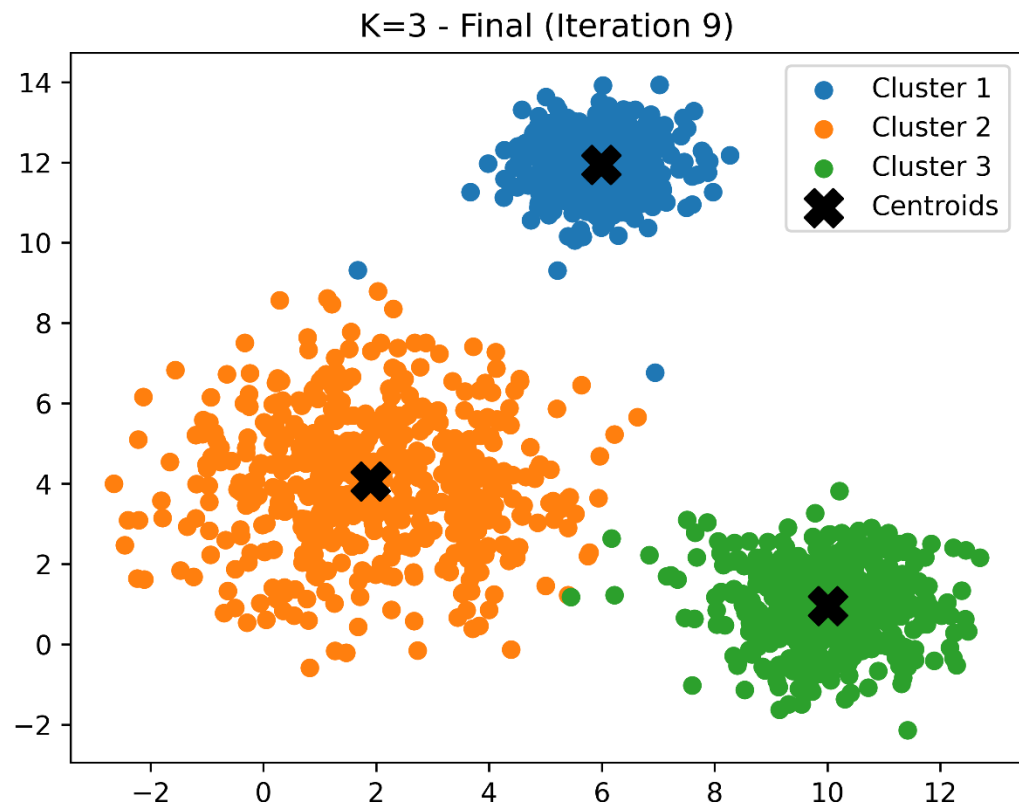
Initial Iteration:



Middle Iteration:

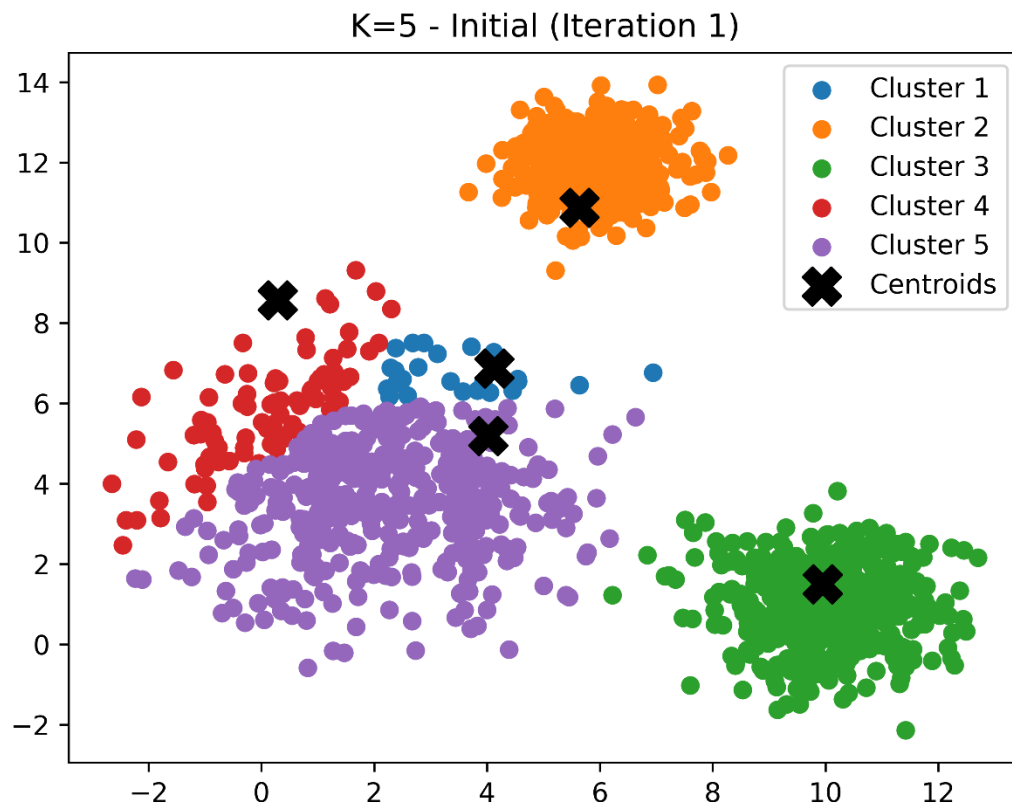


Final Iteration:

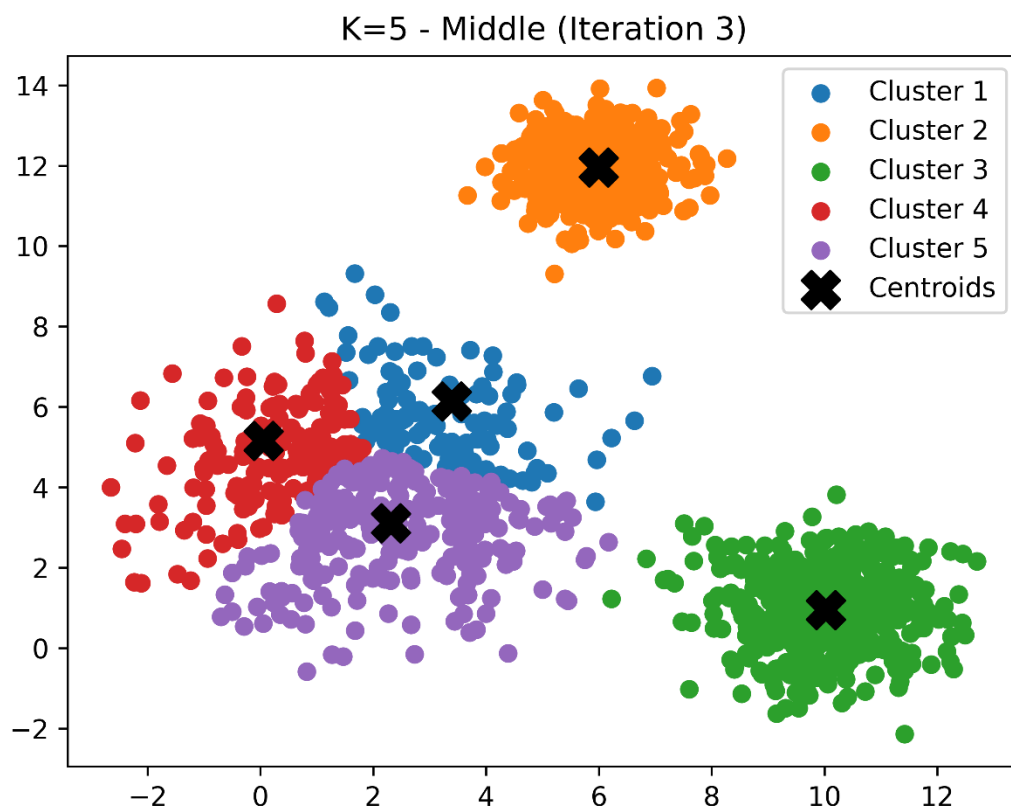


For $K = 5$:

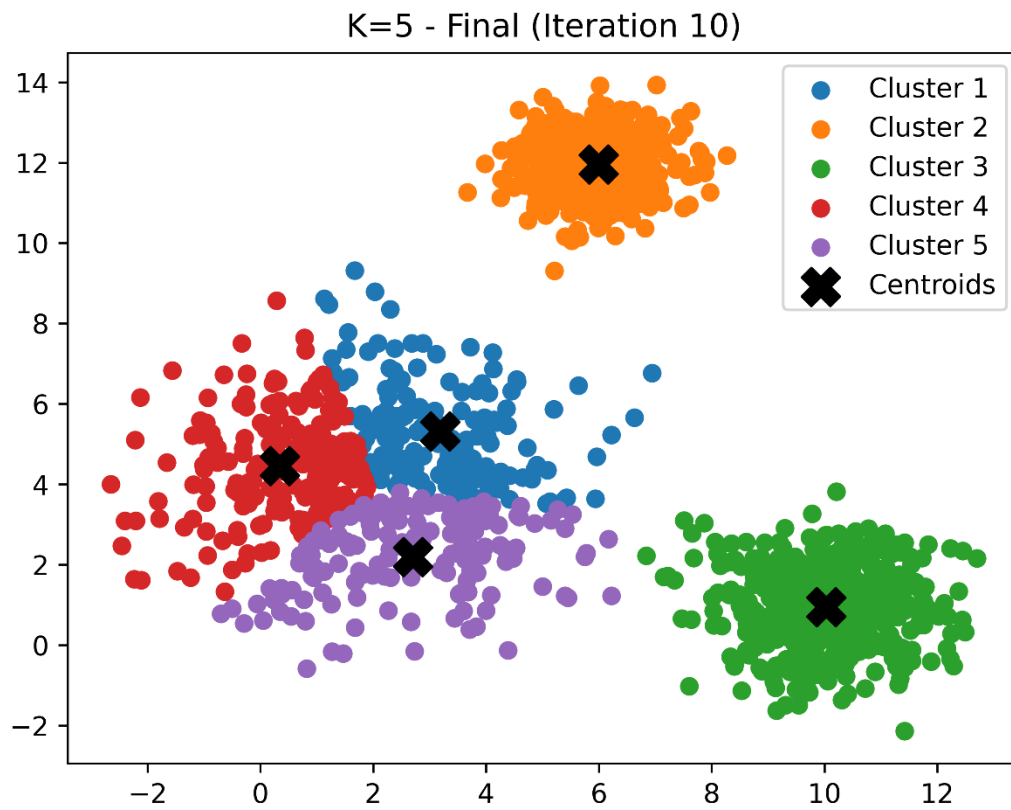
Initial Iteration:



Middle Iteration:



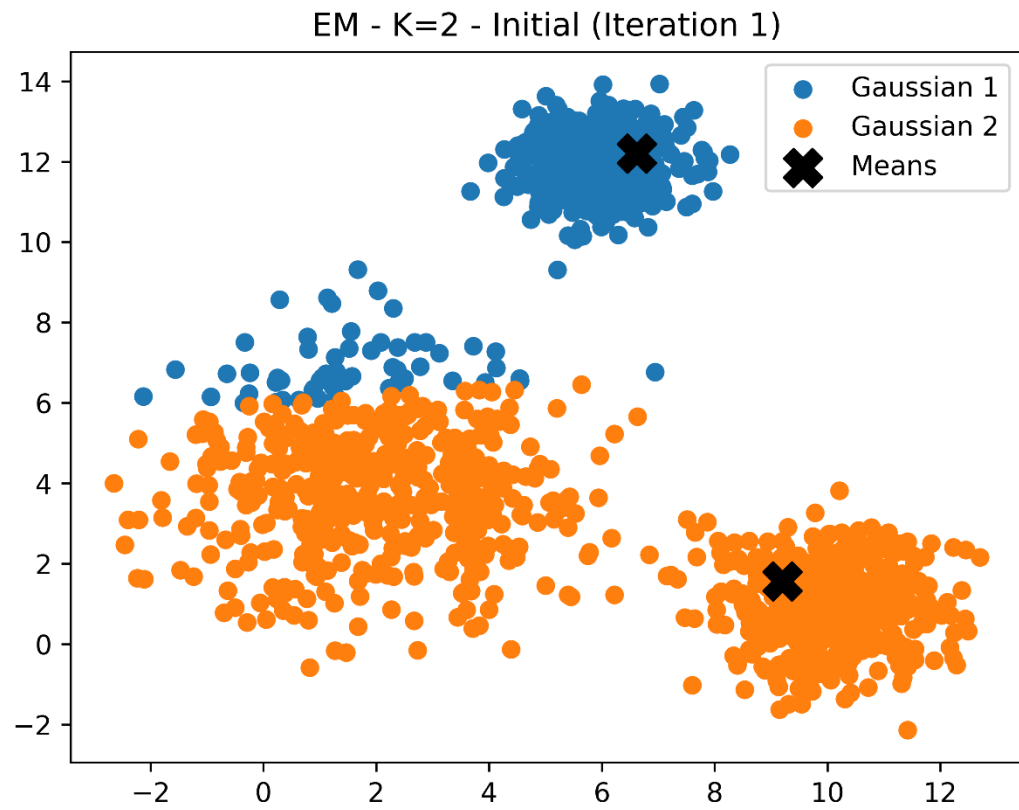
Final Iteration:



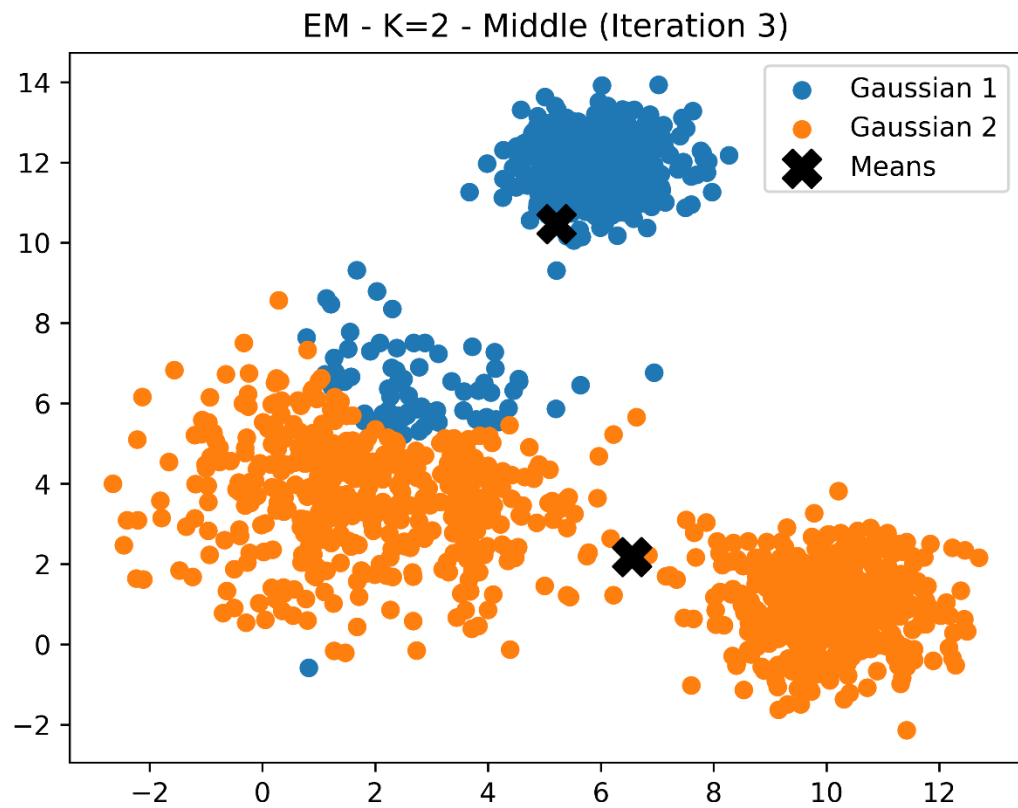
For EM.py : (Extra Credit)

- **For $K=2$ (default)**

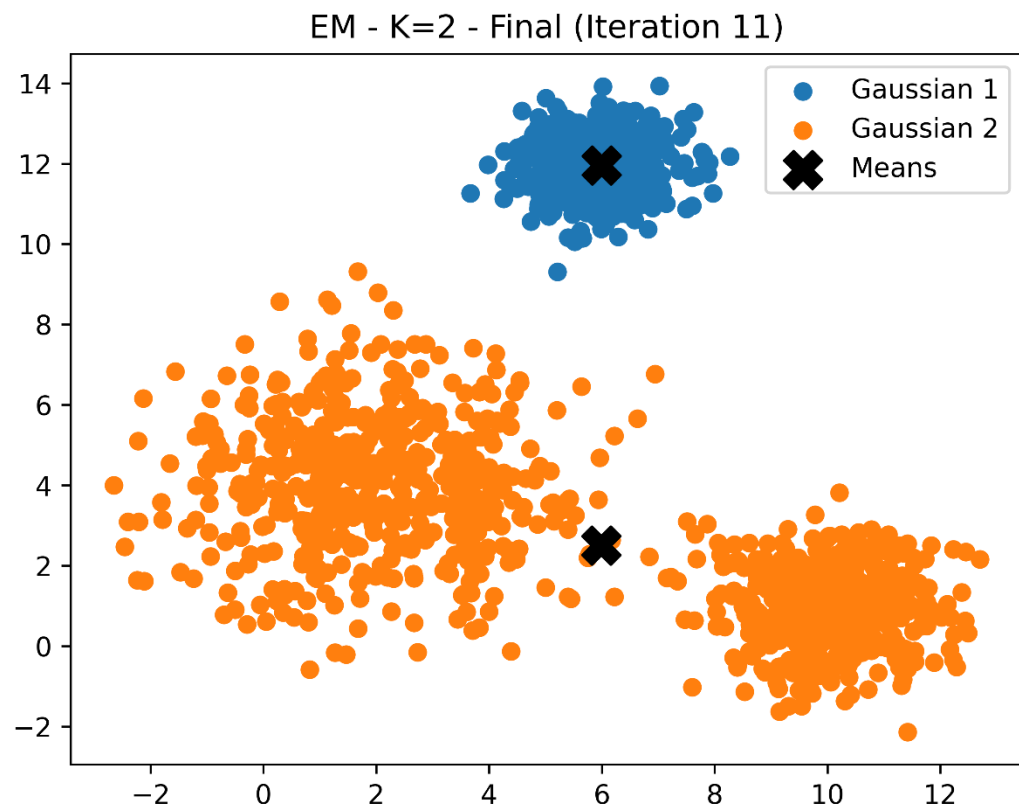
Initial Iteration:



Middle Iteration:

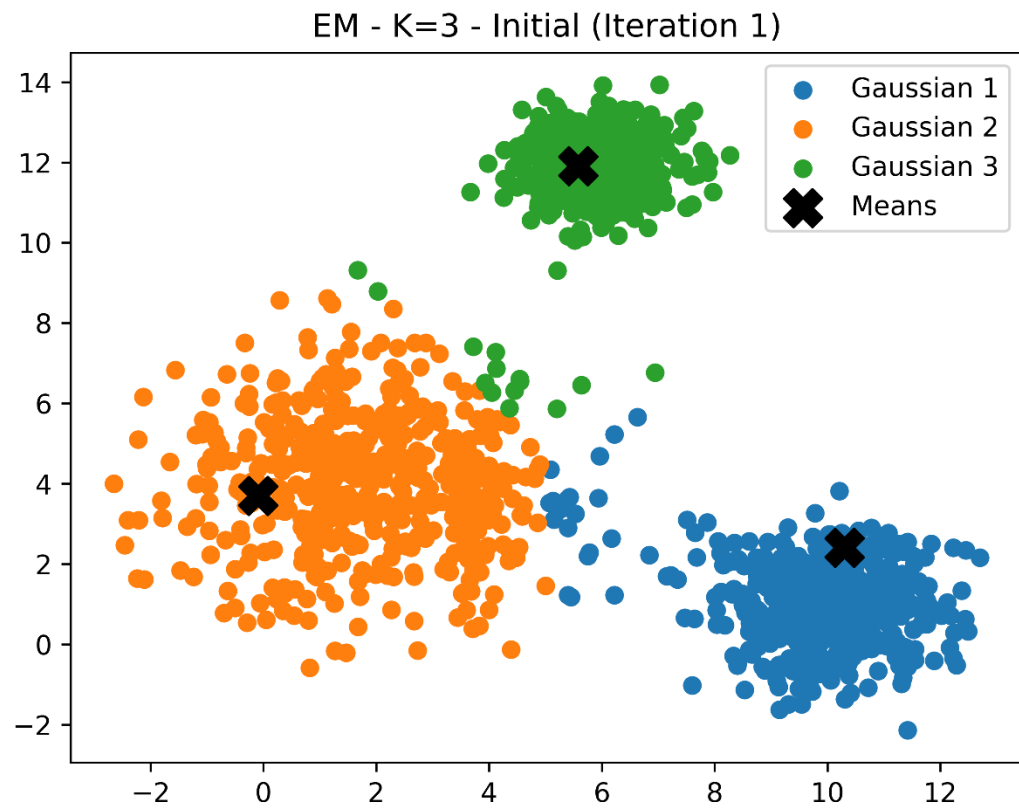


Final Iteration:

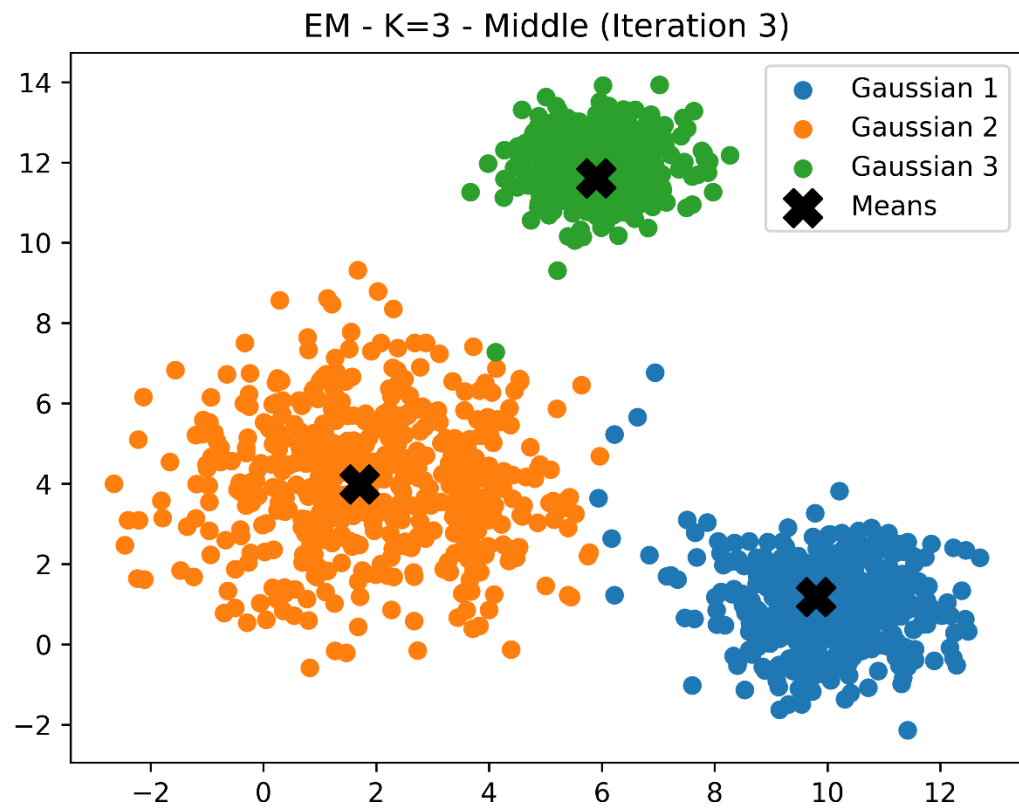


For $K = 3$:

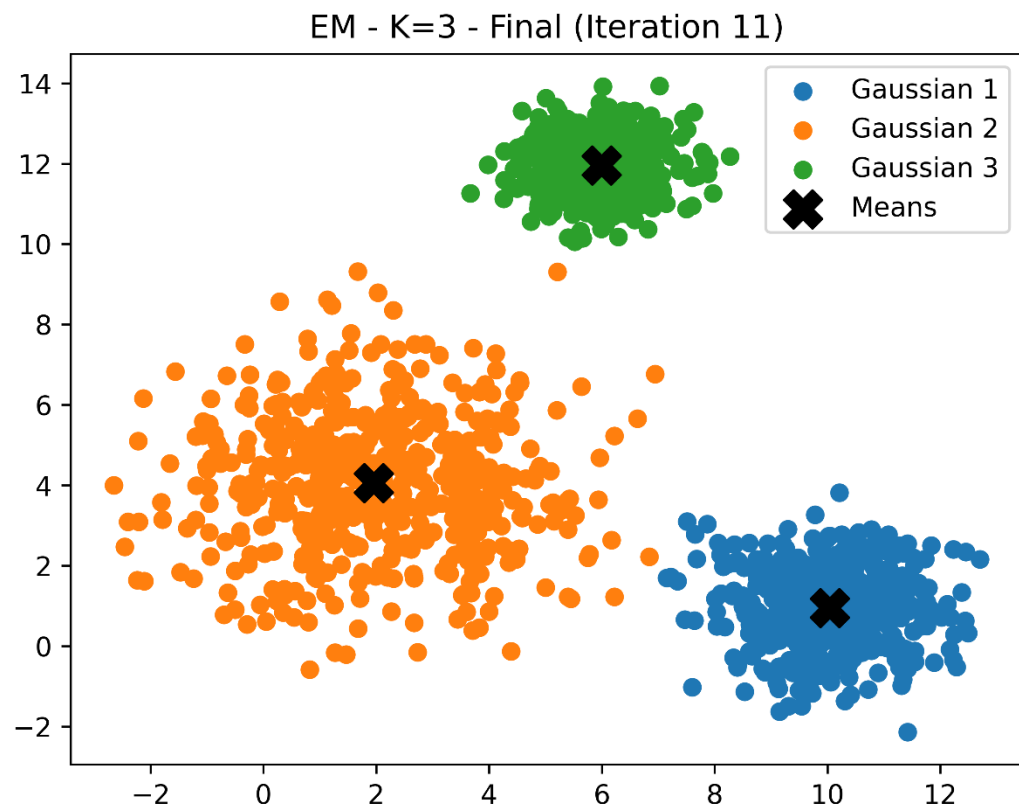
Initial Iteration:



Medium Iteration:

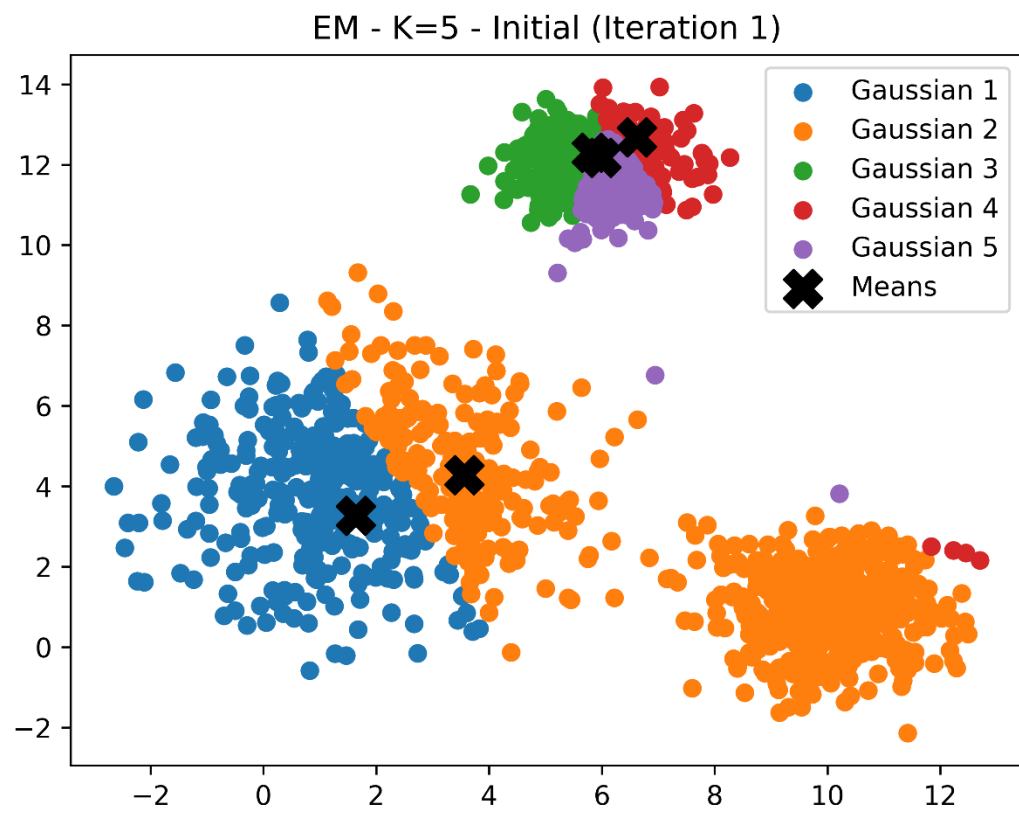


Final Iteration:

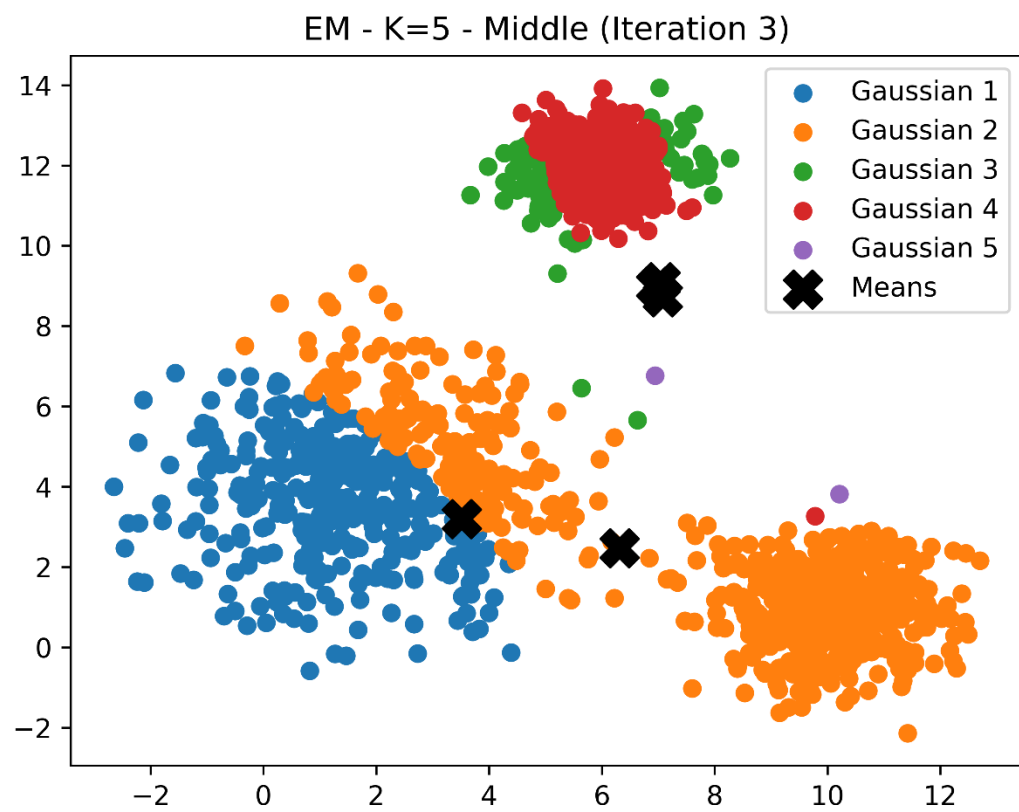


For $K=5$:

Initial Iteration:



Middle Iteration:



Final Iteration:

