

CS 274A Homework 5

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Due Date: Wednesday March 5th

K-means plots

Plots of Clusters

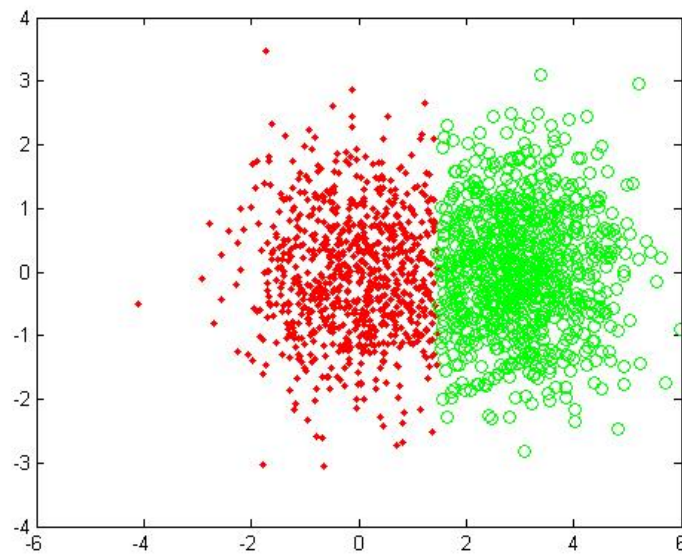


Figure 1: The k-Means plot for dataset1, $K=2$

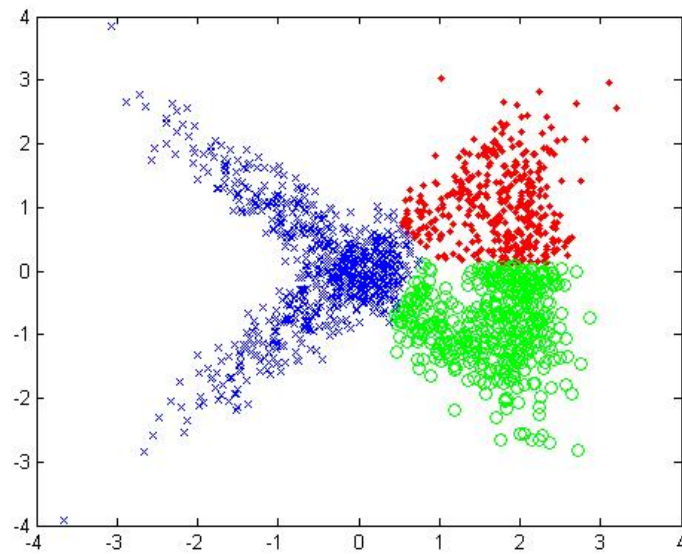
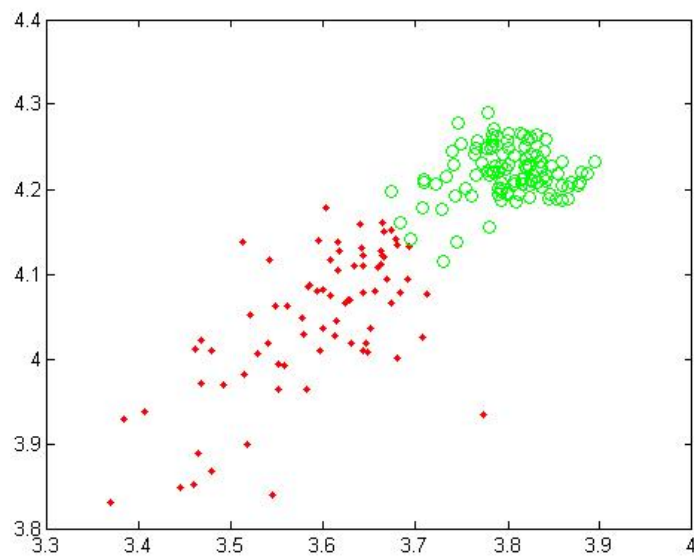
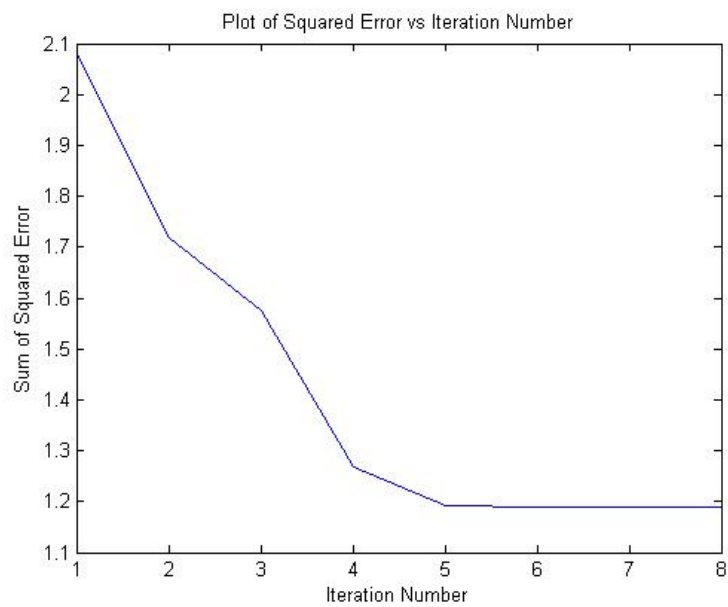


Figure 2: The k-Means plot for dataset2, $K=3$

Figure 3: The k-Means plot for dataset3, $K=2$

Plots of Sum of Squared Errors versus Iteration

Figure 4: The Sum of Squared Error plot for dataset1, $K=2$

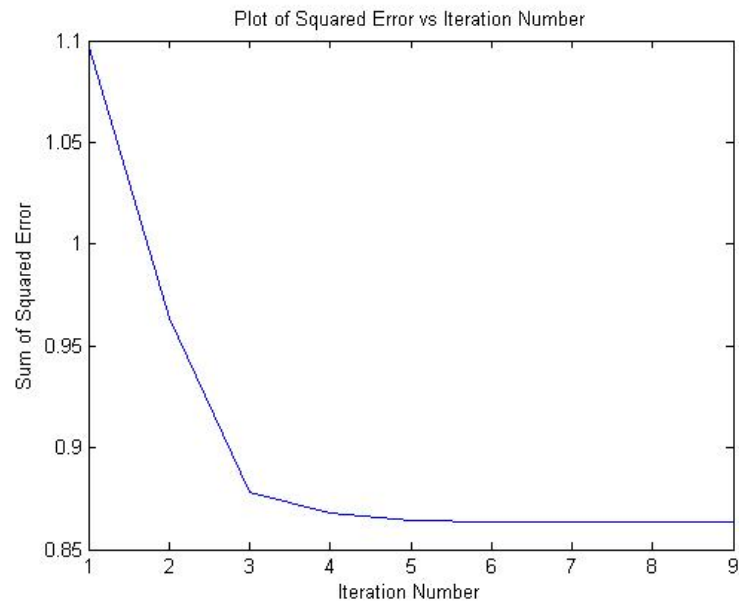


Figure 5: The Sum of Squared Error plot for dataset2, K=3

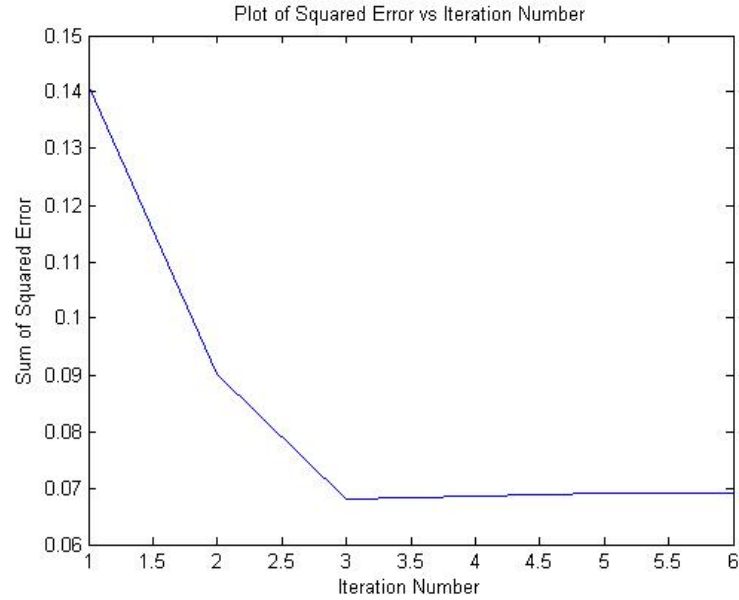


Figure 6: The Sum of Squared Error plot for dataset3, K=2

EM plots

Plots of clusters using EM algorithm

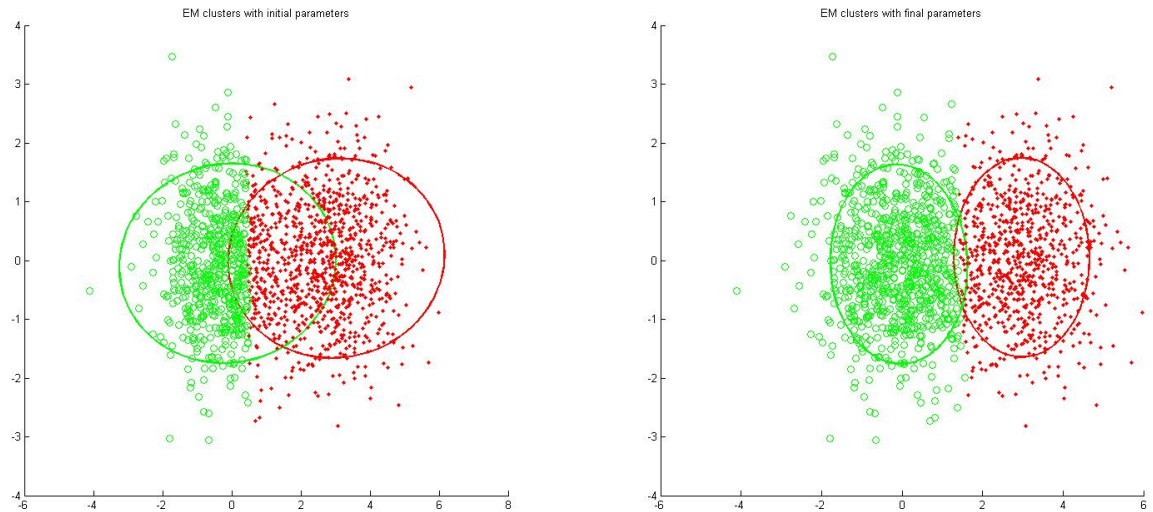


Figure 7: The EM cluster plots for dataset1, K=2, using initialization method 3

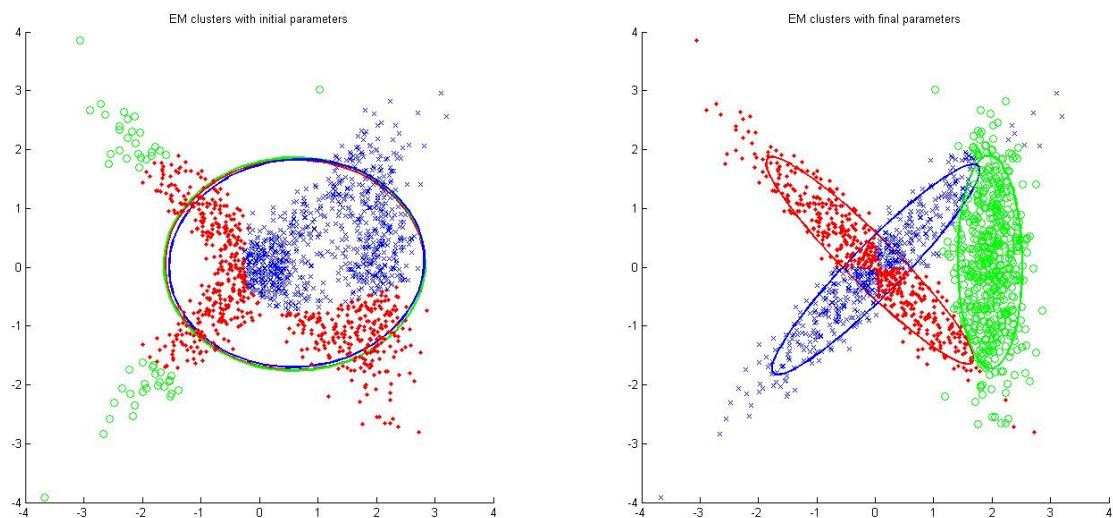
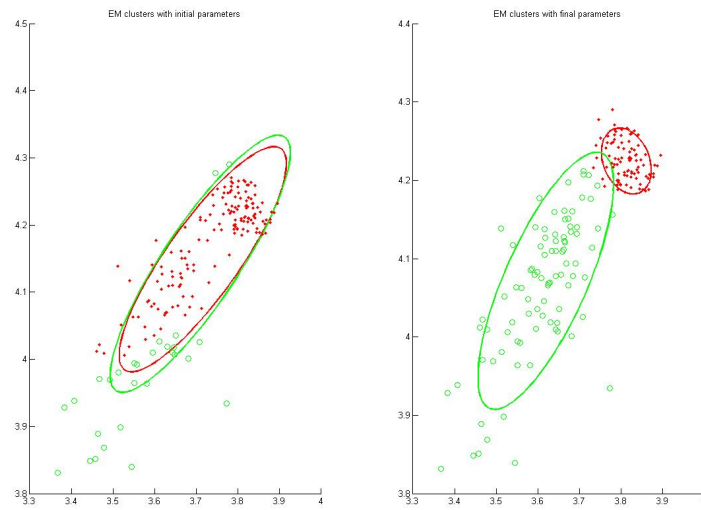
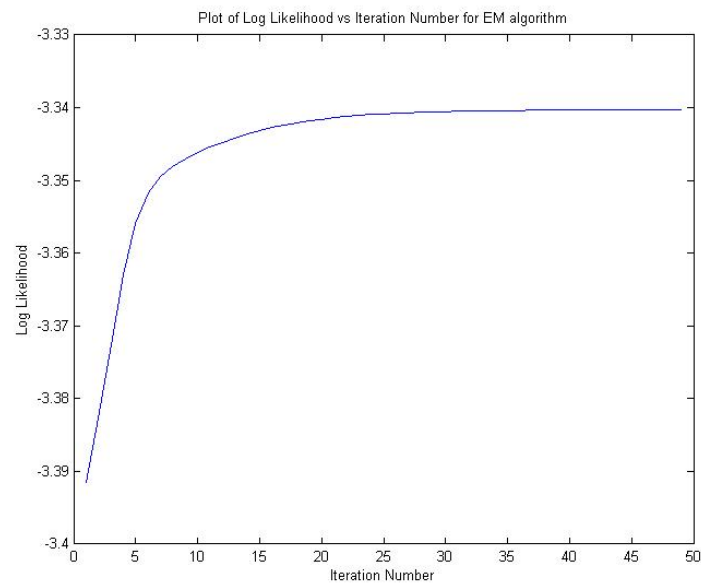


Figure 8: The EM cluster plots for dataset2, K=3, using initialization method 1

Figure 9: The EM cluster plots for dataset3, $K=2$, using initialization method 1

Plots of likelihood using EM algorithm

Figure 10: The likelihood plot for dataset1, $K=2$, using initialization method 3

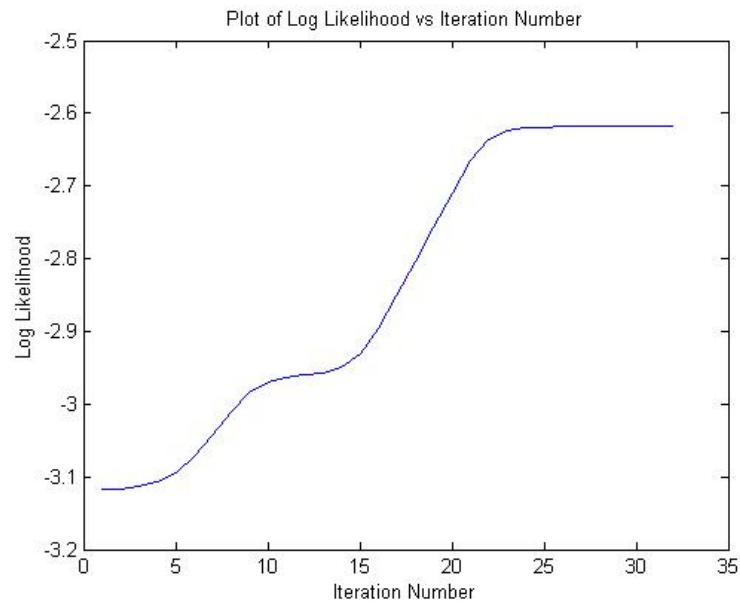


Figure 11: The likelihood plot for dataset2, $K=3$, using initialization method 1

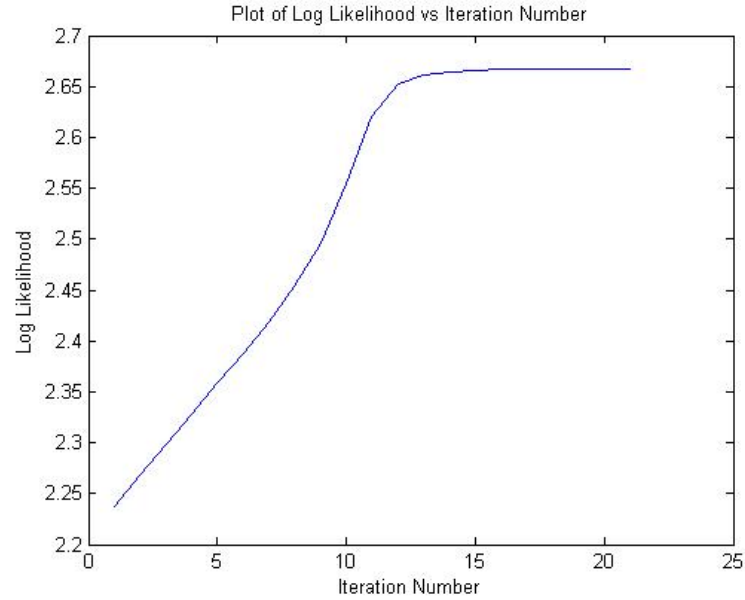


Figure 12: The likelihood plot for dataset3, $K=2$, using initialization method 1