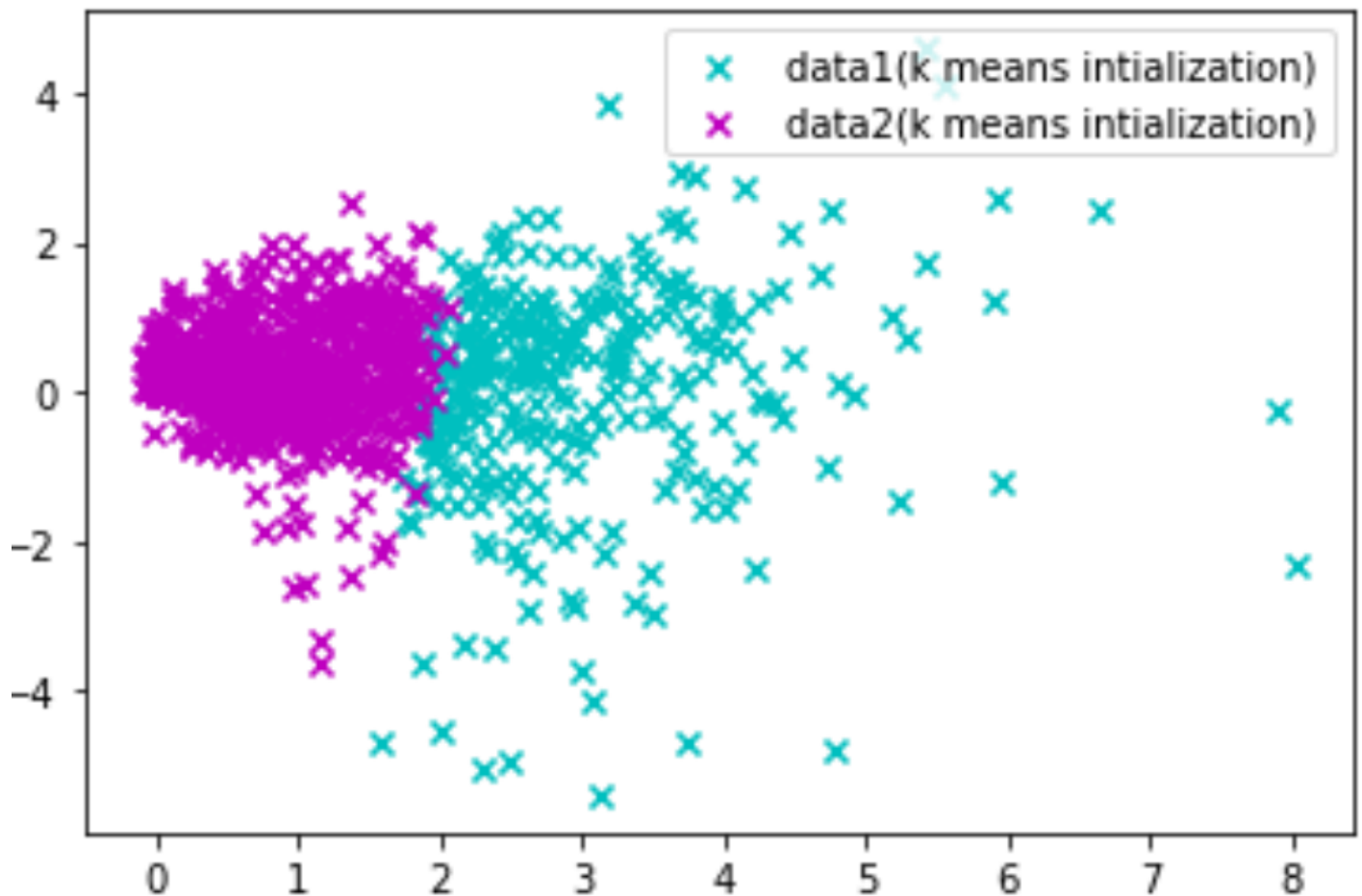


## Ques 4

Testing:

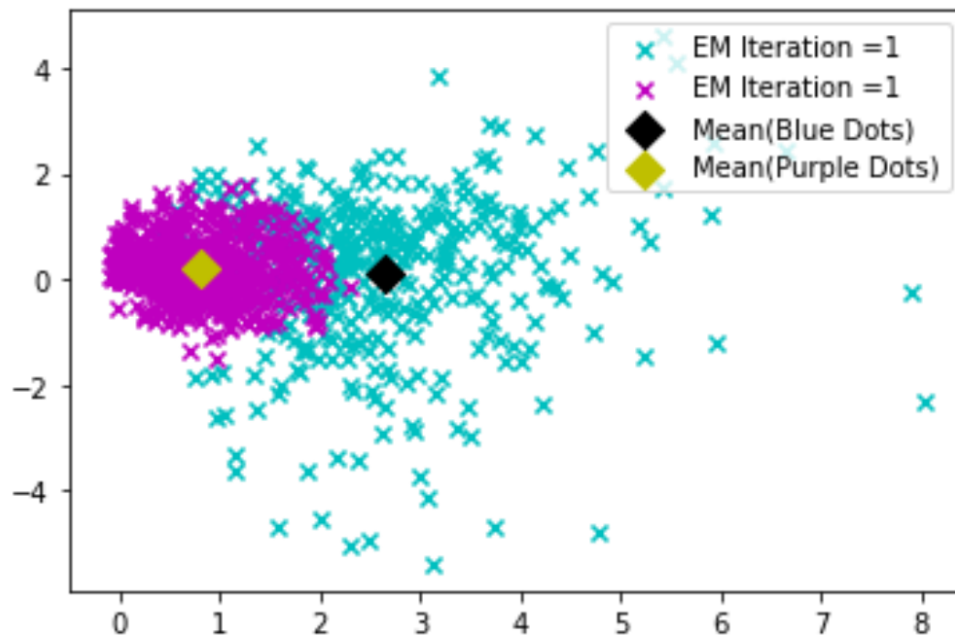
1. For Testing we take a particular review(Say labeled 1 review)
2. We find the liklihood(posterior probability) of the test point using parameter of each gaussian fitted(one gaussian is fitted for label 1 review and other fitted for label 0 reviews)
3. Then on comparing the two obtained liklihood we assign the test point to the class(label1 or label 0) whose liklihood is greator.
4. Classification Accuracy =  $\frac{(\text{Number of Reviews Correctly Classified})}{(\text{Total Number of Reviews})} \times 100$

### Initialization (using k means)

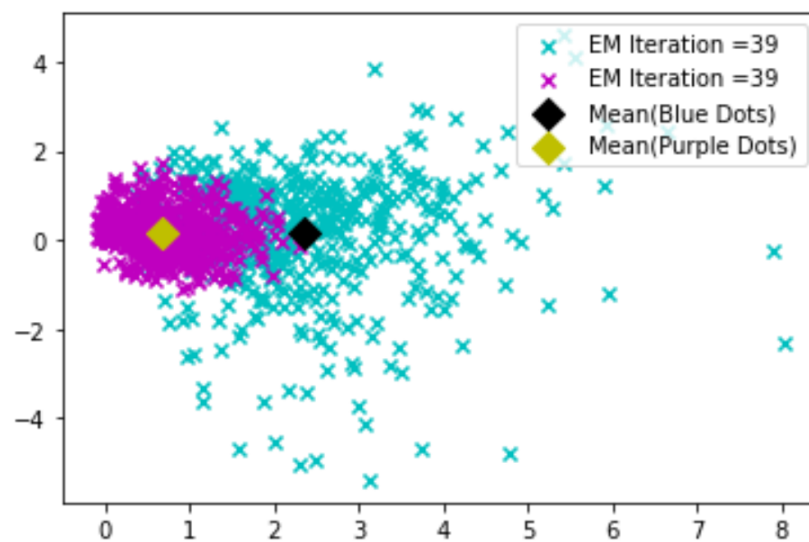


Sample Output(GMM) :

EM Iteration = 1



EM Iteration = 39



Log likelihood vs iteration graph

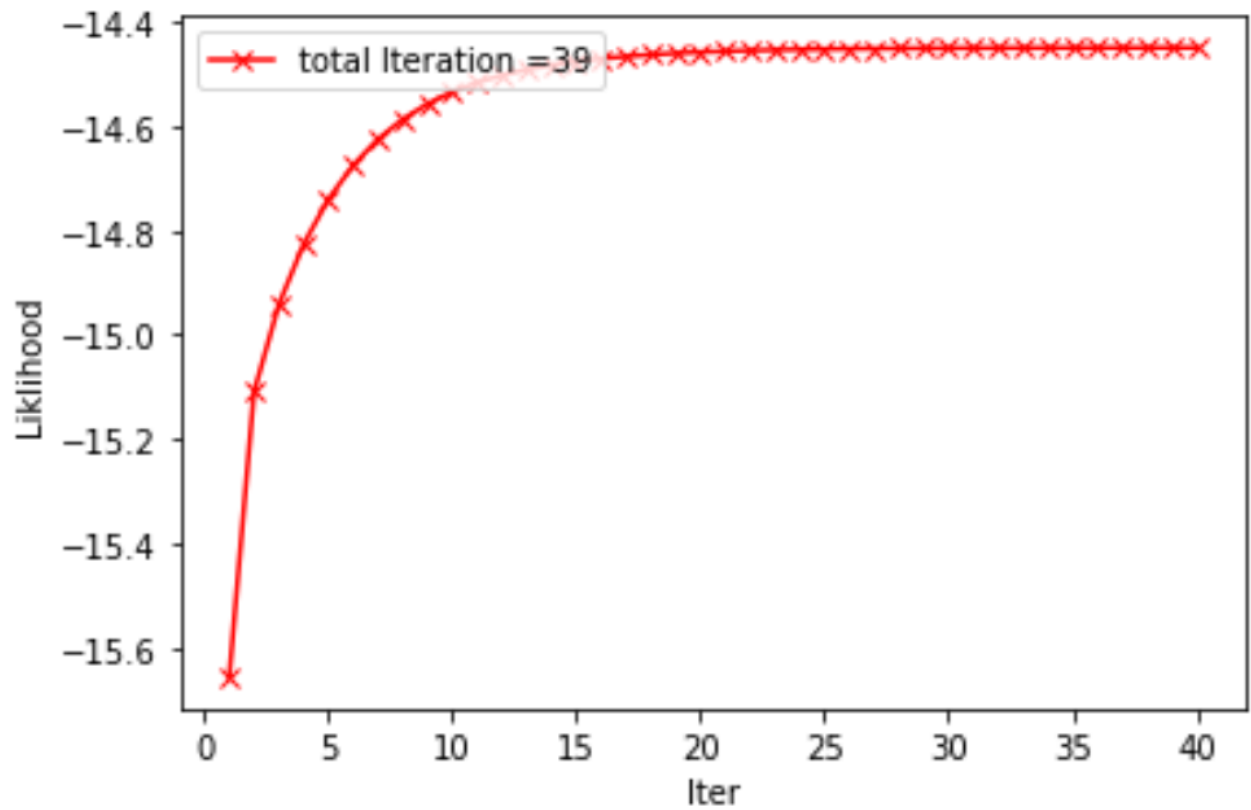


Table accuracy:

	acurracy
Gmm	51.8%