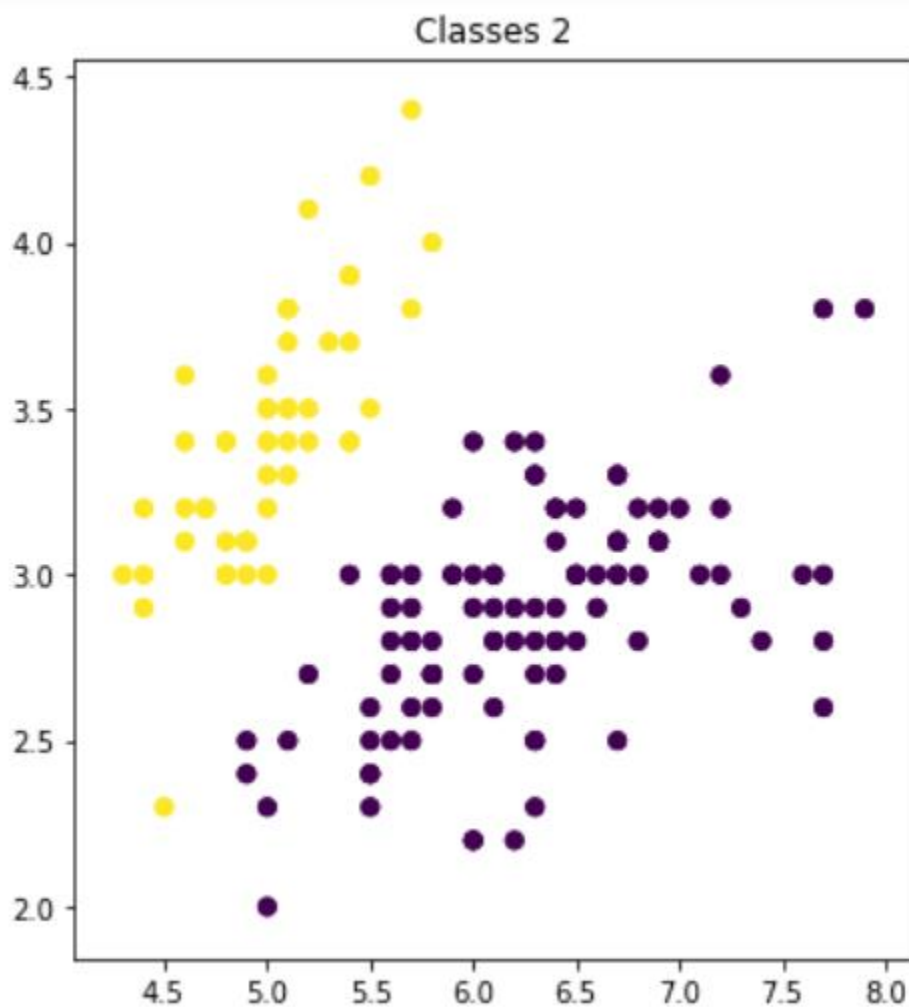


Evaluation and findings:

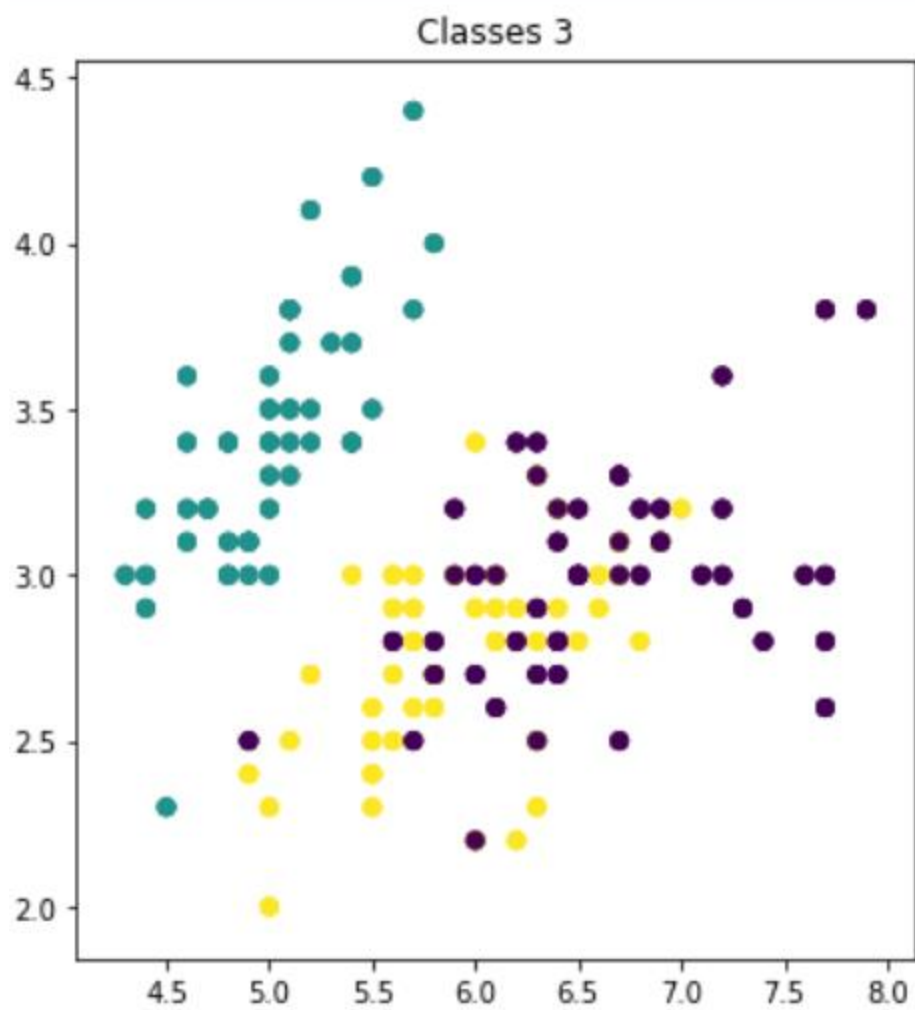
We have evaluated the gaussian mixture model using log likelihood function. We applied EM algorithm on gaussian mixture model and have used log likelihood function to predict the class of a particular data.

As we can see that for 2 classes, the data is divided properly among two clusters with no overlapping. While in cluster 3, there is some overlapping, and in $k=4$, with 4 clusters, there is too much overlapping where we are not able to differentiate among the classes. Hence we are able to distinguish less number of classes properly using this model.

Class 2:



Class 3 :



Class 4:

Classes 4

