

1. Take the credit card score classification data (<https://www.kaggle.com/datasets/sudhanshu2198/processed-data-credit-score/data>). Create training, validation, and test splits in the ratio of 80:10:10. Implement the multiclass Adaboost technique and evaluate the performance of the ensemble model.
2. Implement the SAMME variant of Adaboost on the dataset used in question 2 and compare the performance of the models built using SAMME and compare the performance of SAMME models and Adaboost models in question 2.
3. Take the Iris dataset (<https://www.kaggle.com/datasets/uciml/iris>) that you used in Assignment 5. Use DBSCAN to cluster the points and evaluate the cluster assignments using the gold labels. Compute the silhouette score as well.
4. Take the Iris dataset (<https://www.kaggle.com/datasets/uciml/iris>) that you used in Assignment 5. Implement a perceptron algorithm using no hidden layers, 1 hidden layer, and 2 hidden layers. Compare the performance of the three models.