Artificial Intelligence and Machine Learning Fundamentals

Activity 8: Increasing the Accuracy of Credit Scoring

This section will learn how the parametrization of the k-nearest neighbor classifier affects the end result. The accuracy of credit scoring is currently quite low: 66.5%.
Find a way to increase it by a few percentage points. And to ensure that it happens correctly, you will need to do the previous exercises.
There are many ways to accomplish this exercise. In this solution, I will show you one way to increase the credit score by changing the parametrization.
You must have completed Exercise 13, to be able to complete this activity.

1. Increase the K-value of the k-nearest neighbor classifier from the default 5 to 10, 15, 25, and 50. Evaluate the results:
   You must have completed Exercise 13, to be able to complete this activity
   ```
   classifier =
   neighbors.KNeighborsClassifier(n_neighbors=10)
   classifier.fit(
   features_train,label_train
   )
   classifier.score(features_test, label_test)
   ```
2. After running these lines for all four n_neighbors values, I got the following results:
   K=10: accuracy is 71.5%
   K=15: accuracy is 70.5%
   K=25: accuracy is 72%
   K=50: accuracy is 74%
3. Higher K values do not necessarily mean better score. In this example though, K=50 yielded a better result than K=5.