# **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:

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classifier = neighbors.KNeighborsClassifier(n\_neighbors=10)

classifier.fit(

features\_train,label\_train

)

classifier.score(features\_test, label\_test)

1. 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%

1. Higher K values do not necessarily mean better score. In this example though, K=50 yielded a better result than K=5.