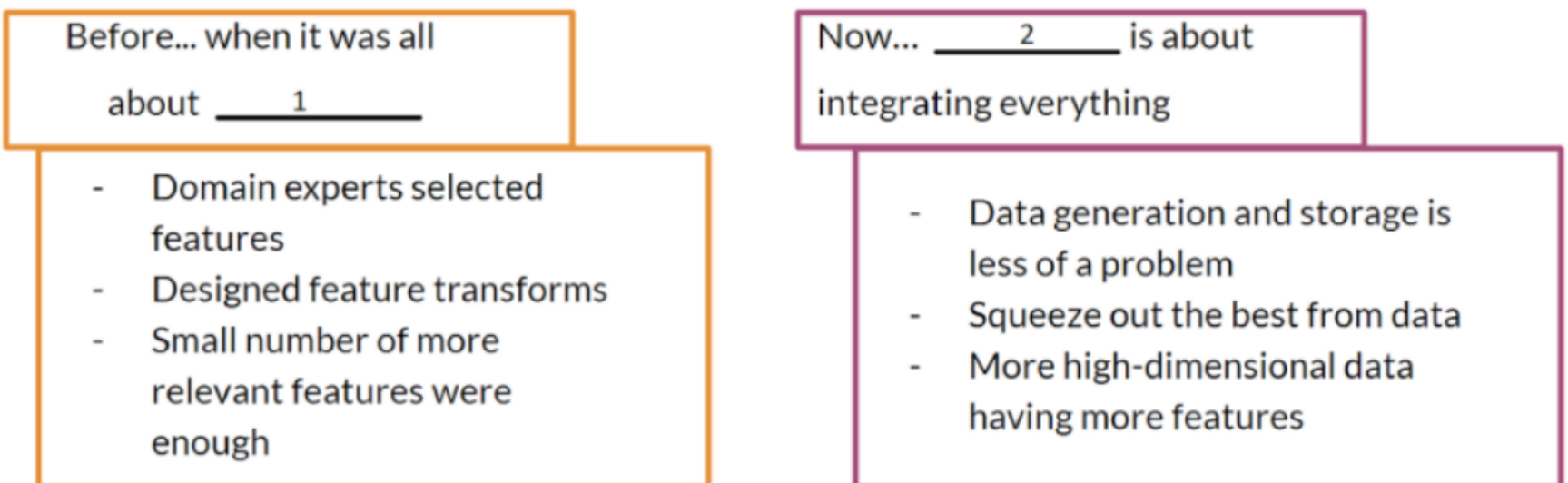
Congratulations! You passed!

Grade received 100% **To pass** 80% or higher

Go to next item

1. Fill in the blanks with the correct answer according to the descriptions in the boxes below:

1 / 1 point



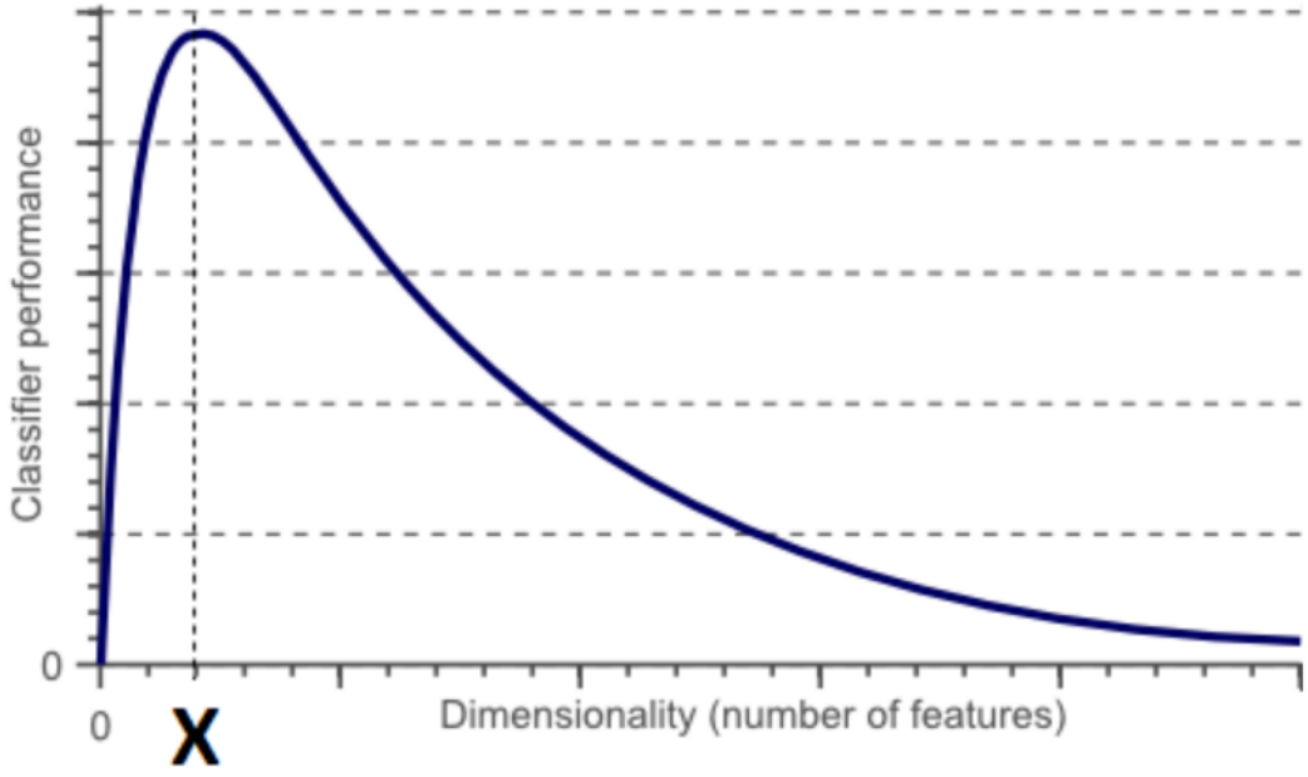
- ○ 1. Data Science. 2. Data mining.
- ○ 1. Data mining. 2. Dimensionality reduction.
- ○ 1. Dimensionality reduction. 2. Data Science.
- ◉ 1. Data mining. 2. Data Science.

Correct

That's right! The "before" and "now" of performance and resource requirements are represented respectively by the Data Mining and Data Science concepts.

2. What does the X value represent?

1 / 1 point



- ○ The worst number of features for making predictions.
- ◉ The optimal number of features.
- ○ The cursed number of dimensions.
- ○ The number of features that reaches the maximum classification error.

Correct

Exactly! The x-axis coordinate of this critical point represents the number of features required by the classifier to work at its best.

3. Which of the following are problems of high dimensionality in model performance? (Select all that apply)

1 / 1 point

- [x] Solutions take longer to reach global optimum

Correct
Right on track! Very often, reaching a global optimum is a more difficult task when dealing with high-dimensional problems.

- [ ] Smaller hypothesis space.
- [x] The possibility of more correlated features is greater.

Correct
You've got it! When having more dimensions, it is possible to have more correlated features making the selection of the most relevant features a more difficult task.

- [x] Higher runtimes and system requirements

Correct
Correct! The more dimensions, the higher the system requirements. Therefore, dimensionality reduction helps optimize the system's performance.

4. What does the following line of code refer to? count_params(model_n.trainable_variables)

1 / 1 point

- ○ The number of testing parameters for Model n.
- ◉ The number of training parameters for Model n.
- ○ The number of classes for Model n.
- ○ The number of dimensions for Model n.

Correct

That's right! This code line allows to count the number of training parameters for the input model.

5. The amount of training data available, the complexity of the decision surface, and the classifier type define the number of _____ to be used

1 / 1 point

- ○ Datasets
- ○ Spaces
- ○ Models
- ◉ Features

Correct

That's right! These three aspects define the amount of features that will be used in a machine learning problem.

6. True Or False: Classification subspaces allow to minimize separation among classes, while regression subspaces are used for maximizing correlation between projected data and response variable.

1 / 1 point

- (●) False
- ( ) True

Correct
That's right! Classification subspaces maximize the separation among classes, while regression intends to maximize the correlation between two variables.