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Machine  
Learning  
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▼ **Module 1. The  
Predictive  
Modeling  
Pipeline**

Module overview

Tabular data  
exploration

Quiz M1 


**Fitting a scikit-  
learn model on  
numerical data**

Quiz M1 

Handling  
categorical data

Quiz M1 

Wrap-up quiz

Wrap-up quiz 

Main take-away

► Module 2.  
Selecting the  
best model

► Module 3.  
Hyperparameter  
tuning

## ✓ Quiz M1.02

Note: For each question **make sure you select all of the correct options**— there may be more than one! Don't forget to use the sandbox notebook if you need.

### Question 1 (1/1 point)

Why do we need two sets: a train set and a test set?

☐ a) to train the model faster

☒ b) to validate the model on unseen data

☐ c) to improve the accuracy of the model



Select all answers that apply

You have used 1 of 2 submissions

### Question 2 (1/1 point)

The generalization performance of a scikit-learn model can be evaluated by:

☒ a) calling `fit` to train the model on the **training set**, `predict` on the **test set** to get the predictions, and compute the score by passing the predictions and the true target values to some metric function

☒ b) calling `fit` to train the model on the **training set** and `score` to compute the score on the **test set**



- ▶ Module 5.  
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- ▶ Module 6.  
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models
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Evaluating  
model  
performance
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☐ d) calling `fit_transform` on the data and then `score` to compute the score on the **test set**



Select all answers that apply

You have used 2 of 2 submissions

### Question 3 (1/1 point)

When calling `cross_validate(estimator, X, y, cv=5)`, the following happens:

☒ a) `x` and `y` are internally split five times with non-overlapping test sets

☐ b) `estimator.fit` is called 5 times on the full `x` and `y`

☒ c) `estimator.fit` is called 5 times, each time on a different training set

☐ d) a Python dictionary is returned containing a key/value containing a NumPy array with 5 scores computed on the **train sets**

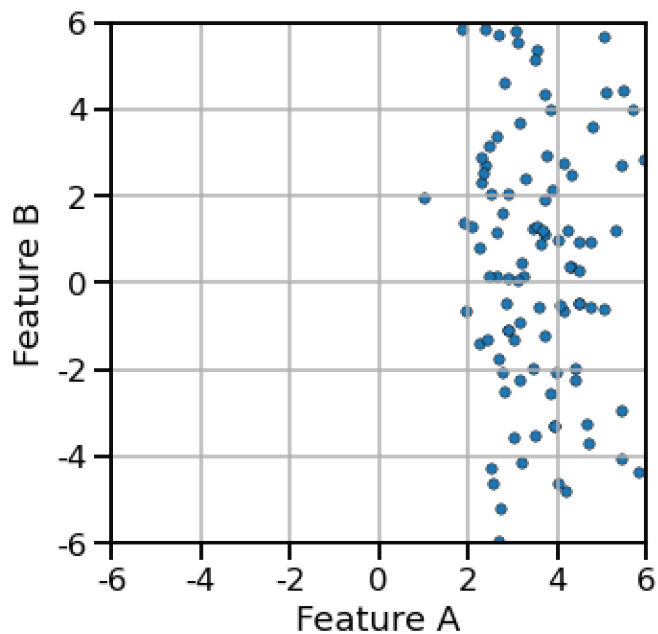
☒ e) a Python dictionary is returned containing a key/value containing a NumPy array with 5 scores computed on the **test sets**



Select all answers that apply

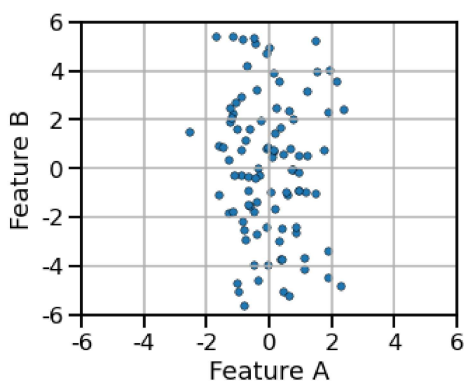
You have used 1 of 2 submissions

### Question 4 (1/1 point)

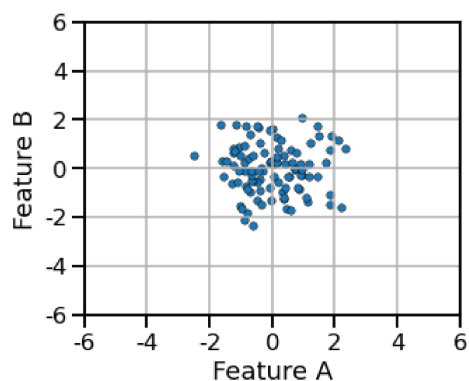


If we process the dataset using a `StandardScaler` with the default parameters, which of the following results do you expect:

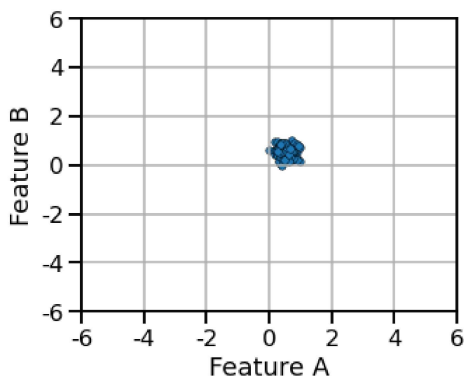
Preprocessing A



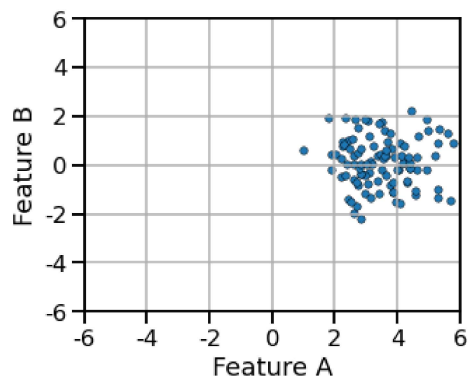
Preprocessing B



Preprocessing C



Preprocessing D





☒ b) Preprocessing B ✓

☐ c) Preprocessing C

☐ d) Preprocessing D

*You have used 1 of 1 submissions*

## Question 5 (1/1 point)

Look at the plots and the answers of the previous question.

A `StandardScaler` transformer with the default parameter:

☒ a) transforms the features so that they have similar ranges

☐ b) transforms the features to lie in the  $[0.0, 1.0]$  range

☒ c) transforms feature values that were originally positive-only into values that can be negative or positive

☒ d) can help logistic regression converge faster (fewer iterations)



*Select all answers that apply*

*You have used 1 of 2 submissions*

## Question 6 (1/1 point)

Cross-validation allows us to:

☐ a) train the model faster

☒ c) estimate the variability of the generalization score



*Select all answers that apply*

*You have used 1 of 2 submissions*

## Question 7 (1/1 point)

`make_pipeline` (as well as `Pipeline`):

☐ a) runs a cross-validation using the transformers and predictor given as parameters

☒ b) combines one or several transformers and a predictor

☐ c) tries several models at the same time

☐ d) plots feature histogram automatically



*Select all answers that apply*

*You have used 1 of 2 submissions*

## YOUR EXPERIENCE

According to you, this whole 'Fitting a scikit-learn model on numerical data' lesson of the course was:

- ☐ **Too easy, I got bored**
- ☐ **Adapted to my skills**
- ☐ **Difficult but I was able to follow**
- ☐ **Too difficult**

To follow this lesson, I spent:

- ☐ **less than 30 minutes**
- ☐ **30 min to 1 hour**
- ☐ **1 to 2 hours**
- ☐ **2 to 4 hours**
- ☐ **more than 4 hours**
- ☐ **I don't know**


Submit

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FORUM (EXTERNAL RESOURCE)

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