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# SCALE FOR PROJECT PISCINE PYTHON DATA SCIENCE (/PROJECTS/PISCINE-PYTHON-DATA-SCIENCE) / DAY 08 (/PROJECTS/PISCINE-PYTHON-DATA-SCIENCE-DAY-08)

You should evaluate 1 student in this team



Git repository

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# **Introduction**

The methodology of School 21 makes sense only if peer-to-peer assessments are done seriously. This document will help you to do it properly.

- Please, stay courteous, polite, respectful and constructive in all communications during this assessment. The bond of trust between community 21 and you depends on it.
- Highlight possible malfunctions of the work done by the person and take the time to discuss and debate it.
- Keep in mind that sometimes there can be differences in interpretation of the tasks and the scope of features. Please, stay open-minded to the vision of the other.

# **Guidelines**

- Evaluate only the files that are on the GIT repository of the student or group.
- Doublecheck that the GIT repository is the one corresponding to the student or the group as long as to the project.
- Meticulously check that nothing malicious has been used

to mislead you and have you assess something except the content of the official repository.

- If you have not finished the project yet, it is compulsory to read the entire instruction before starting the review.
- Use the special flags in the scale to report an empty or non-functional solution as long as a case of cheating.

  In these cases, the assessment is completed and the final grade is 0 (or in a case of cheating is -42).

  However, except for a case of cheating, you are encouraged to continue reviewing the project to identify the problems that caused the situation in order to avoid them for the next assessment.
- You must stop giving points from the first wrong exercise even if the following exercises are correct.

## **Attachments**

| Į | _√ subject.pdt | (https:// | ∕cdn.intra. | 42.tr/pdt | /pdt/49 | 872/en.su | bject.pdf) |
|---|----------------|-----------|-------------|-----------|---------|-----------|------------|
|   |                |           |             |           |         |           |            |

attachments.txt (/uploads/document/document/8793/attachments.txt)

# **Preliminaries**

### Respect the rules

- The repository contains the work of the student (or group).
- The student is able to explain their work at any time during the assessment.
- The general rules and any rules specific to the day are respected throughout the assessment.



 $\times$ No

# Piscine Python | Data Science D08

Any hardcoded result is worth zero for the exercise.

### Exercise 00 - Binary classifier

- Run all the cells in the notebook, they should work without errors
- The result of df.info() contains:

O date 35 non-null object

1 am 35 non-null int64

- 2 pm 35 non-null int64
- 3 target 35 non-null object
- The answer to the first question: no, it is not easy?
- The answer to the second question: no, it is not good?
- The accuracy of the prediction is 0.6285714285714286?
- The accuracy of the naive prediction is 0.7142857142857143?
- The answer to the third question: no, it is not good?
- There are two plots: the first shows the actual data and the second the forecasted data

In all other cases, the test is failed.

✓ Yes

 $\times$ No

### Exercise 01 - Decision boundaries

- Run all the cells in the notebook, they should work without errors
- All the plots contain decision boundaries?
- The accuracy of logistic regression with scaled features is 0.7428571428571429?
- The accuracy of SVC is 0.7428571428571429?
- The accuracy of the decision tree with max\_depth=4 is 0.9428571428571428?
- There is a visualization of the tree itself using plot\_tree?
- The answer to the questions about the number of leaves is 4? In all other cases, the test is failed.

✓ Yes

 $\times$ No

### Exercise 02 - Multiclass

- Run all the cells in the notebook, they should work without errors
- The dataframe that was saved into a file has 1686 rows × 44 columns?
- The accuracy of the naive solution is 0.23487544483985764?
- The top-1 feature for the logistic regression is labname\_code\_rvw?
- The top-1 feature for the SVC is uid\_user\_2?
- The top-1 feature for the tree is labname\_project1?
- The top-1 feature for the random forest is numTrials?

In all other cases, the test is failed.

✓ Yes

 $\times$ No

### Exercise 03 - Overfitting

- Run all the cells in the notebook, they should work without errors
- The accuracy of the logistic regression on the test dataset is 0.6272189349112426?
- The accuracy of the SVC (kernel = linear) on the test dataset is 0.7159763313609467?
- The accuracy of the tree on the test dataset is 0.5295857988165681?
- The accuracy of the random forest on the test dataset is 0.9289940828402367?
- The answer to the first question is random forest?

- The answer to the second question is c?
- The best and final model is RandomForestClassifier?
- The graph with the top-10 most important features for the final model exists?
- The most important feature for the final model is NumTrials? In all other cases, the test is failed.

⊗ Yes × No

### Exercise 04 - Regression

- Run all the cells in the notebook, they should work without errors
- The result of df.info() contains:

0 num\_commits 29 non-null int64

1 pageviews 29 non-null float64

- 2 AVG(diff) 29 non-null float64
- The answer to the question is a diagonal?
- The function is written and used for cross-validation?
- There are the plots for all the three models that contain the actual values and the predictions? In all other cases, the test is failed.

### **Exercise 05 - Clustering**

- Run all the cells in the notebook, they should work without errors
- The function shows both plots on the same graph using subplots?
- The function shows the results for all the three model classes?
- The best number of clusters for KMeans is 8?
- The best number of eps for DBScan is 22?
- The best number of min\_samples for DBScan is 1?
- The best number of clusters for AgglomerativeClustering is 8?
- The dendrogram exists?

In all other cases, the test is failed.

# **Ratings**

Don't forget to check the flag corresponding to the defense



| Conclusion                         |              |       |  |
|------------------------------------|--------------|-------|--|
| Leave a comment on this evaluation | 1            |       |  |
| //                                 |              |       |  |
|                                    |              |       |  |
|                                    | Finish evalu | ation |  |

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