Quiz M3.01

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)

Which parameters below are hyperparameters of `HistGradientBoostingClassifier`?

Remember we only consider hyperparameters to be those that potentially impact the result of the learning procedure and subsequent predictions.

- [ ] a) `c`
- [x] b) `max_leaf_nodes` ✔
- [ ] c) `verbose`
- [ ] d) `classes_`
- [x] e) `learning_rate` ✔

✔

Select all answers that apply

EXPLANATION

solution: b) e)

A hyperparameter is a model parameter that is fixed and affects how the model learns from data. An example of hyperparameter for `KNeighborsClassifier` is `n_neighbors`, which sets how many neighbors are taken into account to classify a new data point.

a) is incorrect: `C` is not a parameter of `HistGradientBoostingClassifier`.

c) is incorrect: `verbose` is a parameter of `HistGradientBoostingClassifier` which allows to set how much information is printed during the fit. Because verbose does not affect how the model learns it is not a hyperparameter.

d) is incorrect: `classes_` is an attribute of `HistGradientBoostingClassifier` (the final `_` indicates that it is estimated from data i.e. available after the fit) not a parameter.

You have used 1 of 2 submissions

Question 2 (1/1 point)

Given an instance named `model` as defined by:

```
from sklearn.linear_model import LogisticRegression
model = LogisticRegression()
```

how do you get the value of the `C` parameter?

- ○ a) `model.get_parameters()['C']`
- ◉ b) `model.get_params()['C']` ✔
- ○ c) `model.get_params('C')`
- ○ d) `model.get_params['C']`

You have used 1 of 1 submissions

Question 3 (1/1 point)

Given `model` defined by:

how do you set the value of the `C` parameter to `5`?

- a) `model.set_params('C', 5)`
- b) `model.set_params({'C': 5})`
- c) `model.set_params()['C'] = 5`
- d) `model.set_params(C=5)` ✔

You have used 1 of 1 submissions

Question 4 (1/1 point)

Given `model` defined by:

```
from sklearn.preprocessing import StandardScaler
from sklearn.linear_model import LogisticRegression
from sklearn.pipeline import Pipeline

model = Pipeline([
    ('scaler', StandardScaler()),
    ('classifier', LogisticRegression())
])
```

how do you set the value of the `C` parameter of the `LogisticRegression` component to 5:

- a) `model.set_params(C=5)`
- b) `model.set_params(logisticregression__C=5)`
- c) `model.set_params(classifier__C=5)` ✔

You have used 1 of 1 submissions

YOUR EXPERIENCE

According to you, this whole 'Manual tuning' lesson was:

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

Submit

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

FORUM (EXTERNAL RESOURCE)

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