

Week 1 Assignment

Zihao Li

Assignment 0

yes

Assignment 2

2b)

▼ Simple Suite For Model Performance

Simple Suite For Model Performance

The suite is composed of the following checks: Train Test Performance, Model Inference Time.
Each check may contain conditions (which will result in pass ✓ / fail ✖ / warning ! / error ?) as well as other outputs such as plots or tables.
Suites, checks and conditions can all be modified. Read more about [custom suites](#).

▶ Didn't Pass

▼ Passed

Status	Check	Condition	More Info
✓	Train Test Performance	Train-Test scores relative degradation is less than 0.2	Found max degradation of -41.44% for metric rmse
✓	Model Inference Time - Train Dataset	Average model inference time for one sample is less than 0.1	Found average inference time (seconds): 3.743e-05
✓	Model Inference Time - Test Dataset	Average model inference time for one sample is less than 0.1	Found average inference time (seconds): 0.00015387

Train Test Performance

Summarize given model performance on the train and test datasets based on selected scorers. [Read More...](#)

Conditions Summary

Status	Condition	More Info
✓	Train-Test scores relative degradation is less than 0.2	Found max degradation of -41.44% for metric rmse

Additional Outputs

mae



rmse



Dataset

Train

Test

[Go to top](#)

Model Inference Time - Train Dataset

Measure model average inference time (in seconds) per sample. [Read More...](#)

Conditions Summary

Status	Condition	More Info
✓	Average model inference time for one sample is less than 0.1	Found average inference time (seconds): 3.743e-05

Additional Outputs

Average model inference time for one sample (in seconds): 3.743e-05
Note - data sampling: Data is sampled from the original dataset, running on 1000 samples out of 10718. Sample size can be controlled with the "n_samples" parameter.

[Go to top](#)

Model Inference Time - Test Dataset

Measure model average inference time (in seconds) per sample. [Read More...](#)

Conditions Summary

Status	Condition	More Info
✓	Average model inference time for one sample is less than 0.1	Found average inference time (seconds): 0.00015387

Additional Outputs

Average model inference time for one sample (in seconds): 0.00015387

[Go to top](#)

▼ Other

No outputs to show.

▼ Didn't Run

No outputs to show.

Assignment 3

1.

2 / 5

mlflow2.3.2ExperimentsModels

Experiments

Search Experiments

☐ Default

☐ Kubeflow Pipeline test run

☐ mlflow-minio-test

☒ week1-lgbm-bike-demand

week1-lgbm-bike-demand

Experiment ID: 5Artifact Location: s3://mlflow5

Description

Edit

Table view

Chart view

metrics.rmse < 1 and params.model = "tree"

Sort: Created

Columns

Refresh

Time created: All time

State: Active

	Run Name	Created	Duration	Source	Models	Parameters	learning_rate	num_leaves	random_state
<input type="checkbox"/>	whimsical-goat-864	1 minute ago	8.5s	ipykernel...	LGBMRegressor...		0.05	63	42

1 matching run

2.

mlflow2.3.2ExperimentsModels

week1-lgbm-bike-demand > whimsical-goat-864

Run ID: 866c7207275f41e5b965c24d8417ee6eDate: 2023-10-31 19:44:14Source: ipykernel_launcher.pyUser: userDuration: 8.5s

Status: FINISHEDLifecycle Stage: active

Description

Parameters (3)

Metrics

Tags

Artifacts

model

Full Path: s3://mlflow5/866c7207275f41e5b965c24d8417ee6e/artifacts/model

MLflow Model

The code snippets below demonstrate how to make predictions using the logged model. This model is also registered to the model registry.

Model schema

Input and output schema for your model. Learn more

Name	Type
------	------

Make Predictions

Predict on a Spark DataFrame:

```
import mlflow
from pyspark.sql.functions import struct, col
logged_model = 'runs:/866c7207275f41e5b965c24d8417ee6e/model'

# Load model as a Spark UDF. Override result type if the model does not return double values.
loaded_model = mlflow.pyfunc.spark_udf(spark, model_uri=logged_model, result_type='double')

# Predict on a Spark DataFrame.
df.withColumn('predictions', loaded_model(struct(*map(col, df.columns))))
```

Predict on a Pandas DataFrame:

```
import mlflow
logged_model = 'runs:/866c7207275f41e5b965c24d8417ee6e/model'

# Load model as a PyFuncModel.
loaded_model = mlflow.pyfunc.load_model(logged_model)

# Predict on a Pandas DataFrame.
import pandas as pd
loaded_model.predict(pd.DataFrame(data))
```

mlflow2.3.2

Experiments

Models

week1-igbm-bike-demand

whimsical-goat-864

Run ID: 866c720727541e5b965c24d8417ee6e

Date: 2023-10-31 19:44:14

Source: `ipykernel_launcher.py`

User: user

Duration: 8.5s

Status: FINISHED

Lifecycle Stage: active

> Description

> Parameters (3)

> Metrics

> Tags

> Artifacts

model

MLmodel

conda.yaml

model.pkl

python_env.yaml

requirements.txt

LGBMRegressor-test-result.html

Full Path: s3://mlflow5/866c720727541e5b965c24d8417ee6e/artifacts/LGBMRegressor-test-result.html

Size: 7.35MB

The suite is composed of the following checks: Train Test Performance, Model Inference Time.

Each check may contain conditions (which will result in pass / fail / warning / error ?) as well as other outputs such as plots or tables.

Suites, checks and conditions can all be modified. Read more about [custom suites](#).

> Didn't Pass

> Passed

Status	Check	Condition	More Info
✓	Train Test Performance	Train-Test scores relative degradation is less than 0.2	Found max degradation of -41.44% for metric rmse
✓	Model Inference Time - Train Dataset	Average model inference time for one sample is less than 0.1	Found average inference time (seconds): 3.29e-06
✓	Model Inference Time - Test Dataset	Average model inference time for one sample is less than 0.1	Found average inference time (seconds): 5.55e-06

Train Test Performance

Summarize given model performance on the train and test datasets based on selected scorers. [Read More...](#)

Conditions Summary

Status	Condition	More Info
✓	Train-Test scores relative degradation is less than 0.2	Found max degradation of -41.44% for metric rmse

mlflow2.3.2

Experiments

Models

week1-igbm-bike-demand

whimsical-goat-864

Run ID: 866c720727541e5b965c24d8417ee6e

Date: 2023-10-31 19:44:14

Source: `ipykernel_launcher.py`

User: user

Duration: 31.1min

Status: FINISHED

Lifecycle Stage: active

> Description

> Parameters (3)

> Metrics

> Tags

> Artifacts

model

MLmodel

conda.yaml

model.pkl

python_env.yaml

requirements.txt

LGBMRegressor-test-result.html

model_comparison.html

Full Path: s3://mlflow5/866c720727541e5b965c24d8417ee6e/artifacts/LGBMRegressor-test-result.html

Size: 7.35MB

Train Test Performance

Summarize given model performance on the train and test datasets based on selected scorers. [Read More...](#)

Conditions Summary

Status	Condition	More Info
✓	Train-Test scores relative degradation is less than 0.2	Found max degradation of -41.44% for metric rmse

Additional Outputs

mae

rmse

Dataset

Train

Test

3.

mlflow2.3.2ExperimentsModels

Registered Models >

LGBMRegressorModel

Created Time: 2023-10-31 17:56:55Last Modified: 2023-10-31 19:44:23

> DescriptionEdit

> Tags

> Versions

AllActive 0Compare

<input type="checkbox"/>	Version	Registered at	Created by	Stage	Description
<input type="checkbox"/>	Version 3	2023-10-31 19:44:23		None	

<1>

Assignment 4

mlflow2.3.2ExperimentsModels

week1-lgbm-bike-demand >

whimsical-goat-864

Run ID: 866c720727541e5b965c24d8417ee6eDate: 2023-10-31 19:44:14Source: tpynkernel_launcher.pyUser: userDuration: 31.1min

Status: FINISHEDLifecycle Stage: active

> DescriptionEdit

> Parameters (3)

> Metrics

> Tags

> Artifacts

model

MLmodelconda.yamlmodel.pklpython_env.yamlrequirements.txtLGBMRegressor-test-result.htmlmodel_comparison.html

Full Path: s3://mlflow5/866c720727541e5b965c24d8417ee6e/artifacts/model_comparison.htmlSize: 7.32MB

Multi Model Performance Report

Summarize performance scores for multiple models on test datasets. [Read More...](#)

Additional Outputs

mae

rmse

Model

LGBMRegressorElasticNet

5 / 5