

ActivitiesTerminalMar 23 16:14samara@hitloop: ~/Videos

Best model saved as: best_model.pkl with Accuracy: 0.9166

Loading best model and checking for drift with original and synthetic data...

KS Statistic on original test data : 0.0000

No drift detected on original data, as expected.

KS Statistic on artificially drifted data: 0.6082

Drift detected on artificially generated data. Retraining model...

/home/samara/anaconda3/lib/python3.11/site-packages/keras/src/layers/convolutional/base_conv.py:107: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a layer. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.
super().__init__(activity_regularizer=activity_regularizer, **kwargs)

Epoch 1/20
157/157 1s 4ms/step - accuracy: 0.6191 - loss: 1.1273

Epoch 2/20
157/157 1s 5ms/step - accuracy: 0.8076 - loss: 0.5193

Epoch 3/20
157/157 1s 4ms/step - accuracy: 0.8469 - loss: 0.4242

Epoch 4/20
157/157 1s 5ms/step - accuracy: 0.8654 - loss: 0.3811

Epoch 5/20
157/157 1s 4ms/step - accuracy: 0.8791 - loss: 0.3517

Epoch 6/20
157/157 1s 4ms/step - accuracy: 0.8837 - loss: 0.3236

Epoch 7/20
157/157 1s 5ms/step - accuracy: 0.8938 - loss: 0.2973

Epoch 8/20
157/157 1s 4ms/step - accuracy: 0.9072 - loss: 0.2690

Epoch 9/20
157/157 1s 5ms/step - accuracy: 0.9088 - loss: 0.2613

Epoch 10/20
157/157 1s 4ms/step - accuracy: 0.9095 - loss: 0.2404

Epoch 11/20
157/157 1s 4ms/step - accuracy: 0.9249 - loss: 0.2199

Epoch 12/20
157/157 1s 5ms/step - accuracy: 0.9333 - loss: 0.1988

Epoch 13/20
157/157 1s 4ms/step - accuracy: 0.9300 - loss: 0.1961

Epoch 14/20
157/157 1s 5ms/step - accuracy: 0.9308 - loss: 0.1900

Epoch 15/20
157/157 1s 5ms/step - accuracy: 0.9441 - loss: 0.1657

Epoch 16/20
157/157 1s 5ms/step - accuracy: 0.9501 - loss: 0.1515

Epoch 17/20
157/157 1s 4ms/step - accuracy: 0.9523 - loss: 0.1419

Epoch 18/20
157/157 1s 5ms/step - accuracy: 0.9579 - loss: 0.1271

Epoch 19/20
157/157 1s 5ms/step - accuracy: 0.9569 - loss: 0.1254

```
Activities Terminal Mar 23 16:18 samara@hitloop: ~/Videos
KS Statistic on original test data : 0.0000
No drift detected on original data, as expected.
KS Statistic on artificially drifted data: 0.6082
Drift detected on artificially generated data. Retraining model...
/home/samara/anaconda3/lib/python3.11/site-packages/keras/src/layers/convolutional/base_conv.py:107: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a layer. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.
  super().__init__(activity_regularizer=activity_regularizer, **kwargs)
Epoch 1/20
157/157 ————— 1s 4ms/step - accuracy: 0.6191 - loss: 1.1273
Epoch 2/20
157/157 ————— 1s 5ms/step - accuracy: 0.8076 - loss: 0.5193
Epoch 3/20
157/157 ————— 1s 4ms/step - accuracy: 0.8469 - loss: 0.4242
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157/157 ————— 1s 4ms/step - accuracy: 0.9095 - loss: 0.2404
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Epoch 13/20
157/157 ————— 1s 4ms/step - accuracy: 0.9300 - loss: 0.1961
Epoch 14/20
157/157 ————— 1s 5ms/step - accuracy: 0.9308 - loss: 0.1900
Epoch 15/20
157/157 ————— 1s 5ms/step - accuracy: 0.9441 - loss: 0.1657
Epoch 16/20
157/157 ————— 1s 5ms/step - accuracy: 0.9501 - loss: 0.1515
Epoch 17/20
157/157 ————— 1s 4ms/step - accuracy: 0.9523 - loss: 0.1419
Epoch 18/20
157/157 ————— 1s 5ms/step - accuracy: 0.9579 - loss: 0.1271
Epoch 19/20
157/157 ————— 1s 5ms/step - accuracy: 0.9569 - loss: 0.1254
Epoch 20/20
157/157 ————— 1s 4ms/step - accuracy: 0.9639 - loss: 0.1069
Retrained model saved as: retrained_model.pkl
(base) samara@hitloop: ~/Videos$
```

Activities

Google Chrome

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M2_Justifical

M3_MLOps

M5_MLOps

Assignment

fashion_mnist

Fashion MNIS

lime_explana

MLflow

127.0.0.1:80

127.0.0.1:5000/#/experiments/695082901439436626/runs/b982e2dda9774c4c97e1e5cff6a1a651

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mlflow2.21.0

ExperimentsModelsPrompts

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fashion_mnist_drift_detection_task

model_run_5

OverviewModel metricsSystem metricsTracesArtifacts

Description

No description

Details

Created at	03/23/2025, 01:56:38 PM
Created by	samara
Experiment ID	695082901439436626
Status	Finished
Run ID	b982e2dda9774c4c97e1e5cff6a1a651
Duration	4.0min
Datasets used	—
Tags	Add tags
Source	M4_MLOps_Assignment2_Group92.py
Logged models	—
Registered models	—
Registered prompts	—

Parameters (2)

Search parameters

Parameter	Value
batch_size	32
epochs	30

Metrics (4)

Search metrics

Metric	Value
recall	0.9093
accuracy	0.9093
f1_score	0.9097992336215888
precision	0.9112242166891751

Activities

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M3_MLOps

M5_MLOps

Assignment

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Fashion MNIST

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MLflow

127.0.0.1:80

127.0.0.1:5000/#/experiments/695082901439436626/runs/b982e2dda9774c4c97e1e5cff6a1a651/model-metrics

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fashion_mnist_drift_detection_task

model_run_5

Overview

Model metrics

System metrics

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Artifacts

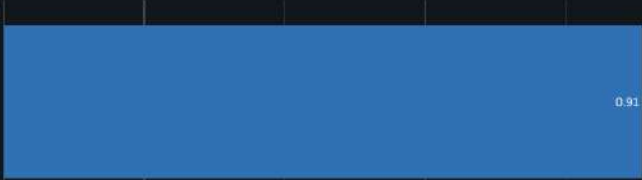
Search metric charts

Auto-refresh

Model metrics (4)

Add chart

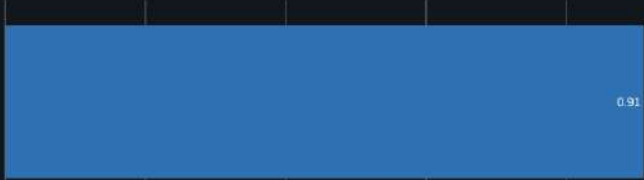
accuracy



0.91

model_run_5

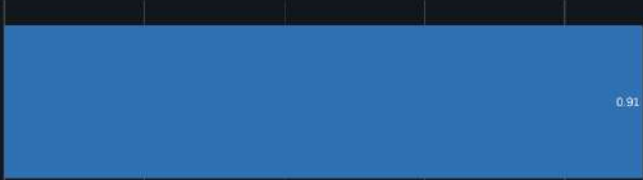
f1_score



0.91

model_run_5


precision



0.91

model_run_5

recall



0.91

model_run_5

Add section

...

Description

No description

Details


Parameters (0)

No parameters recorded

Metrics (1)

Q Search metrics

Overview Model metrics System metrics Traces Artifacts



50

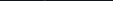


Figure 1 is a line graph titled "Change in the number of cases over time for COVID-19 in the Republic of Serbia". The x-axis is labeled "Time" and spans from 2020 to 2022. The y-axis is labeled "Number of cases" and ranges from 0 to 100,000. There are two data series: "Number of cases" (blue line) and "Number of deaths" (red line). The number of cases starts near zero in early 2020, rises sharply to a peak of approximately 80,000 in late 2020, and then fluctuates with a general downward trend, ending around 40,000 in early 2022. The number of deaths remains very low throughout the period, with a slight increase in late 2020 and early 2021, peaking at around 1,000 cases, and then declining to near zero by early 2022.

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Assignment

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MLflow

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127.0.0.1:5000/#/experiments/695082901439436626/runs/dc17f84882f24c6db9825a6d4151b780

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fashion_mnist_drift_detection_task

Drift_Detection_Artificial

OverviewModel metricsSystem metricsTracesArtifacts

DescriptionNo description

Details

Created at	03/23/2025, 02:00:37 PM
Created by	samara
Experiment ID	695082901439436626
Status	Finished
Run ID	dc17f84882f24c6db9825a6d4151b780
Duration	4ms
Datasets used	—
Tags	Add tags
Source	M4_MLOps_Assignment2_Group92.py
Logged models	—
Registered models	—
Registered prompts	—

Parameters (0)

No parameters recorded

Metrics (1)

Search metrics

Metric	Value
ks_statistic_drifted	0.6082154336734694

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MLflow

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fashion_mnist_drift_detection_task

Drift_Detection_Artificial

Overview

Model metrics

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Search metric charts

Auto-refresh

Model metrics (1)

Add chart

ks_statistic_drifted

0.61

ks_statistic_drifted: 0.6082154336734694

0

0.1

0.2

0.3

0.4

0.5

0.6

Drift_Detection_Artificial

Add section

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M3_MLOps/

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Assignment

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Fashion MNIS

lime_explane

MLflow

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127.0.0.1:5000/#/experiments/695082901439436626/runs/70d7f979b3ea4b64a28d85e795258675

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fashion_mnist_drift_detection_task

Retraining_After_Drift

Overview

Model metrics

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Description

No description

Details

Created at	03/23/2025, 02:00:37 PM
Created by	samara
Experiment ID	695082901439436626
Status	Finished
Run ID	70d7f979b3ea4b64a28d85e795258675
Duration	15.0s
Datasets used	—
Tags	Add tags
Source	M4_MLOps_Assignment2_Group92.py
Logged models	—
Registered models	—
Registered prompts	—

Parameters (0)

No parameters recorded

Metrics (1)

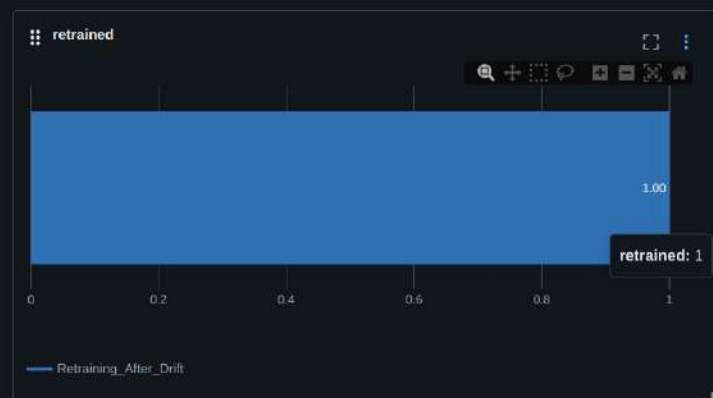
Search metrics

Metric	Value
retrained	1

10

✓ Auto-refresh

+ Add chart



+ Add section