DVC Initialize

```
PS C:\Users\Abreham\Desktop\10acad\Swahili-Speech-To-Text> dvc init -f
Initialized DVC repository.

You can now commit the changes to git.

+---------------------------------------------------------------------+
|                                                                     |
|        DVC has enabled anonymous aggregate usage analytics.         |
|     Read the analytics documentation (and how to opt-out) here:     |
|             <https://dvc.org/doc/user-guide/analytics>              |
|                                                                     |
+---------------------------------------------------------------------+

What's next?
------------
- Check out the documentation: <https://dvc.org/doc>
- Get help and share ideas: <https://dvc.org/chat>
- Star us on GitHub: <https://github.com/iterative/dvc>
PS C:\Users\Abreham\Desktop\10acad\Swahili-Speech-To-Text>
```

Tracking

```
PS C:\Users\Abreham\Desktop\10acad\Swahili-Speech-To-Text> dvc add metadata.csv
100% Adding...|████████████████████████████████████████████████████████████████████████████████|1/1 [00:00,  1.33file/s]

To track the changes with git, run:

        git add metadata.csv.dvc .gitignore
PS C:\Users\Abreham\Desktop\10acad\Swahili-Speech-To-Text>
```

Data version

```
PS C:\Users\Abreham\Desktop\10acad\Swahili-Speech-To-Text> git l
og
commit 8c24616f375ee5d3248da93ac126ee76be41df99 (HEAD -> main, tag: v2, tag: v1)Author: abreham <aynuyeabresh@gmail.com>
Date:   Fri Aug 13 11:05:15 2021 -0300

    data:track

commit 9792888f396a42d0bd44c0206ee090ba17135746
Author: abreham <aynuyeabresh@gmail.com>
Date:   Fri Aug 13 10:58:57 2021 -0300

    Configure remote storage

commit 1a8ebde77d6ae8ed78304575cb204933399c26e8
Author: abreham <aynuyeabresh@gmail.com>
Date:   Fri Aug 13 10:30:47 2021 -0300

    Configuring remote storage

commit 61c2f01a8904a982aa40874b586f626980a01421
Author: abreham <aynuyeabresh@gmail.com>
Date:   Fri Aug 13 10:29:27 2021 -0300

    Add raw data

commit 9ec51516e8bb2ec2817991e8e88dab988cb13ad5
Author: abreham <aynuyeabresh@gmail.com>
Date:   Fri Aug 13 10:22:38 2021 -0300
```

mlflow Experiments Models GitHub Docs

Run a7a0fe807a684007ba7f3df984b24878

Speech model simple rnn > Run a7a0fe807a684007ba7f3df984b24878

Date: 2021-08-10 09:30:33

Source: C:\Users\Abreham\miniconda3\lib\site-packages\ipykernel_launcher.py

User: Abreham

Duration: 2.5min

Status: FINISHED

▸ Notes

▾ Parameters

Name	Value
batch_size	None
class_weight	None
epochs	10

127.0.0.1:5000/#/experiments/1/runs/a7a0fe807a684007ba7f3df984b24878

validation_steps	None
workers	1

▼ Metrics

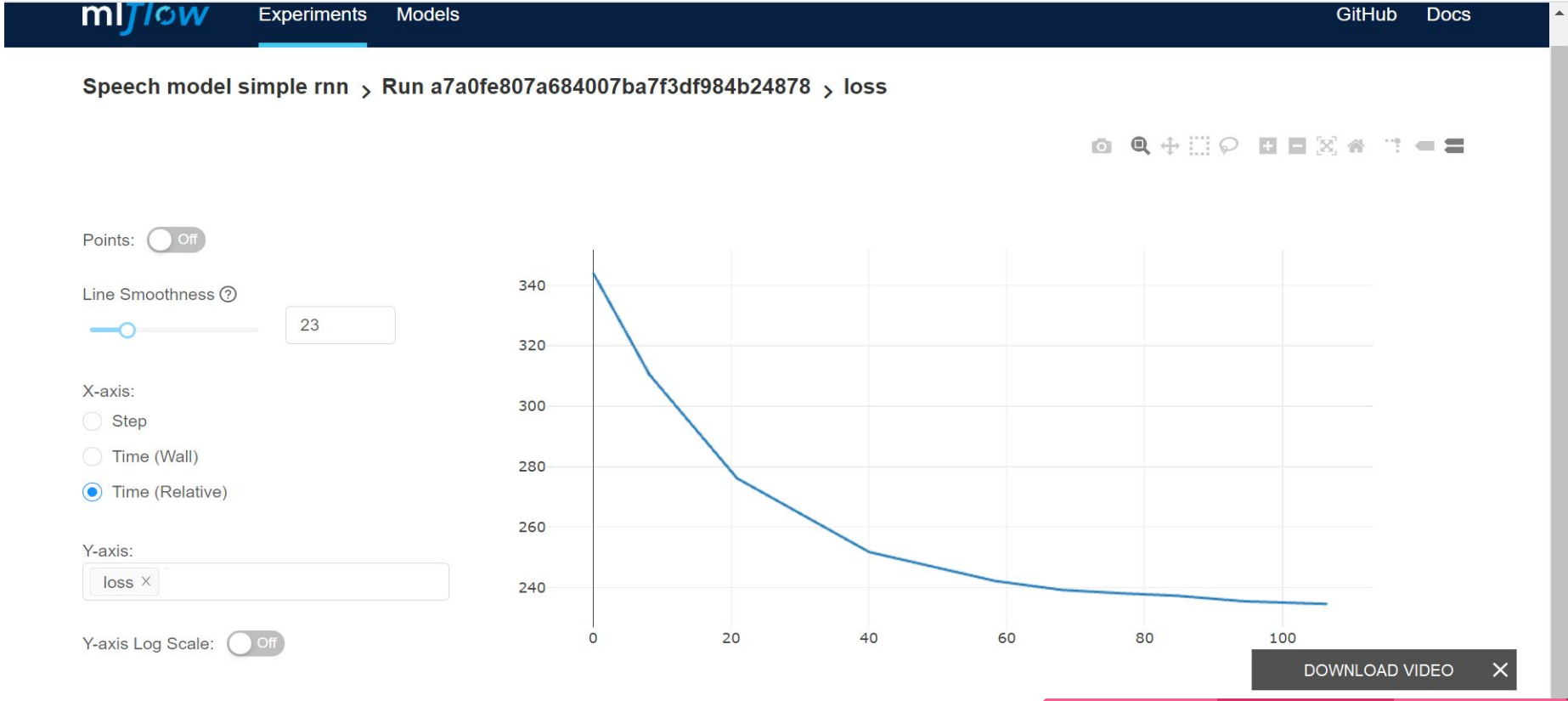
Name	Value
loss	234.3

▶ Tags

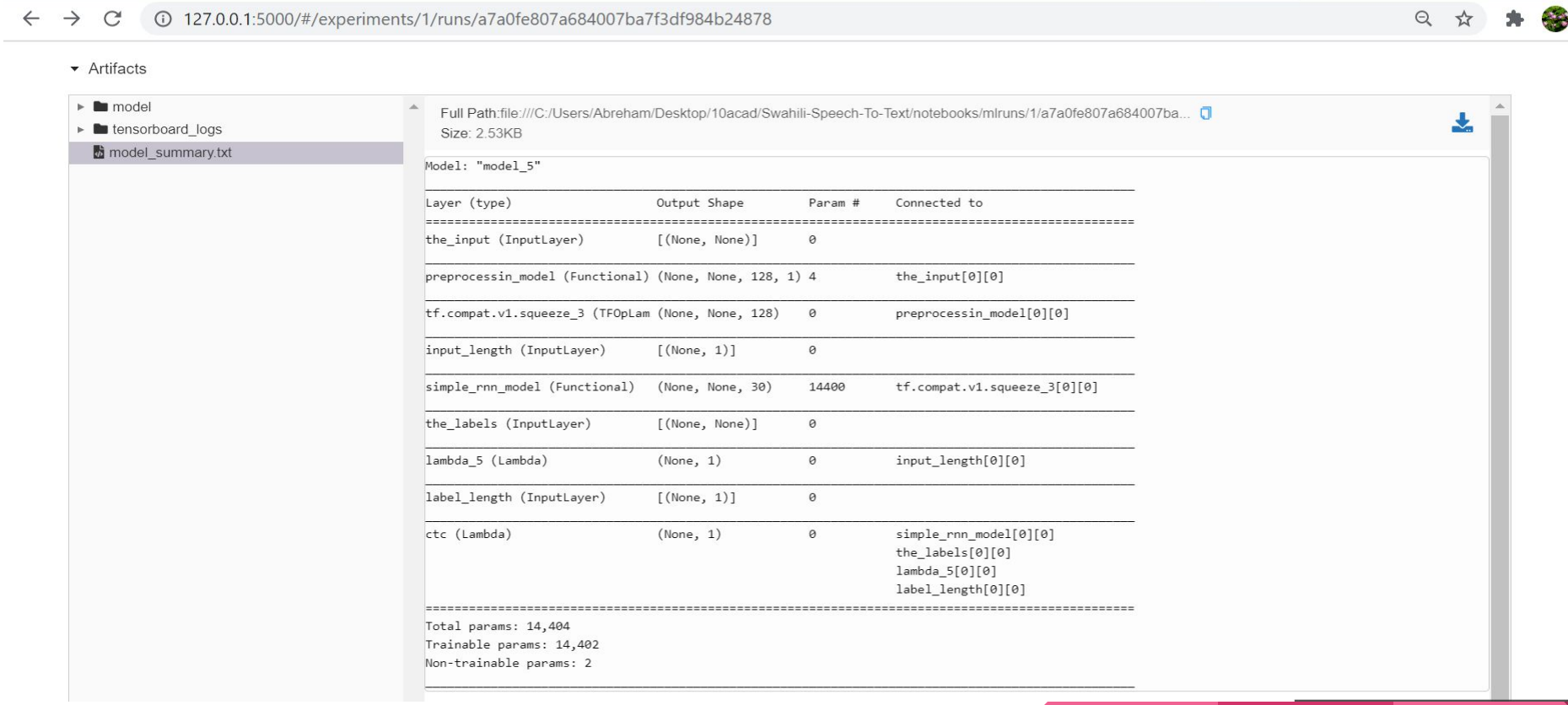
▼ Artifacts

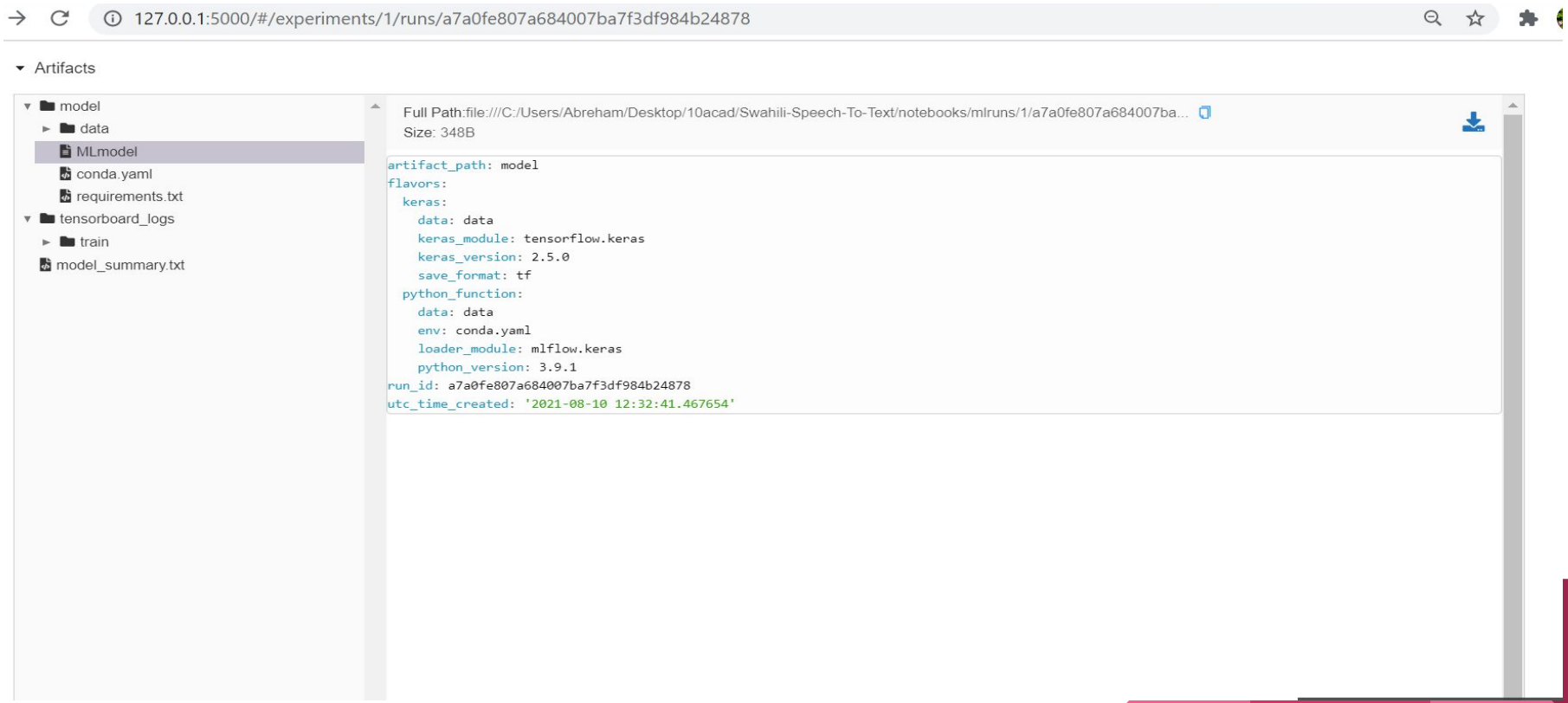
- ▶ model
- ▶ tensorboard_logs
- model_summary.txt

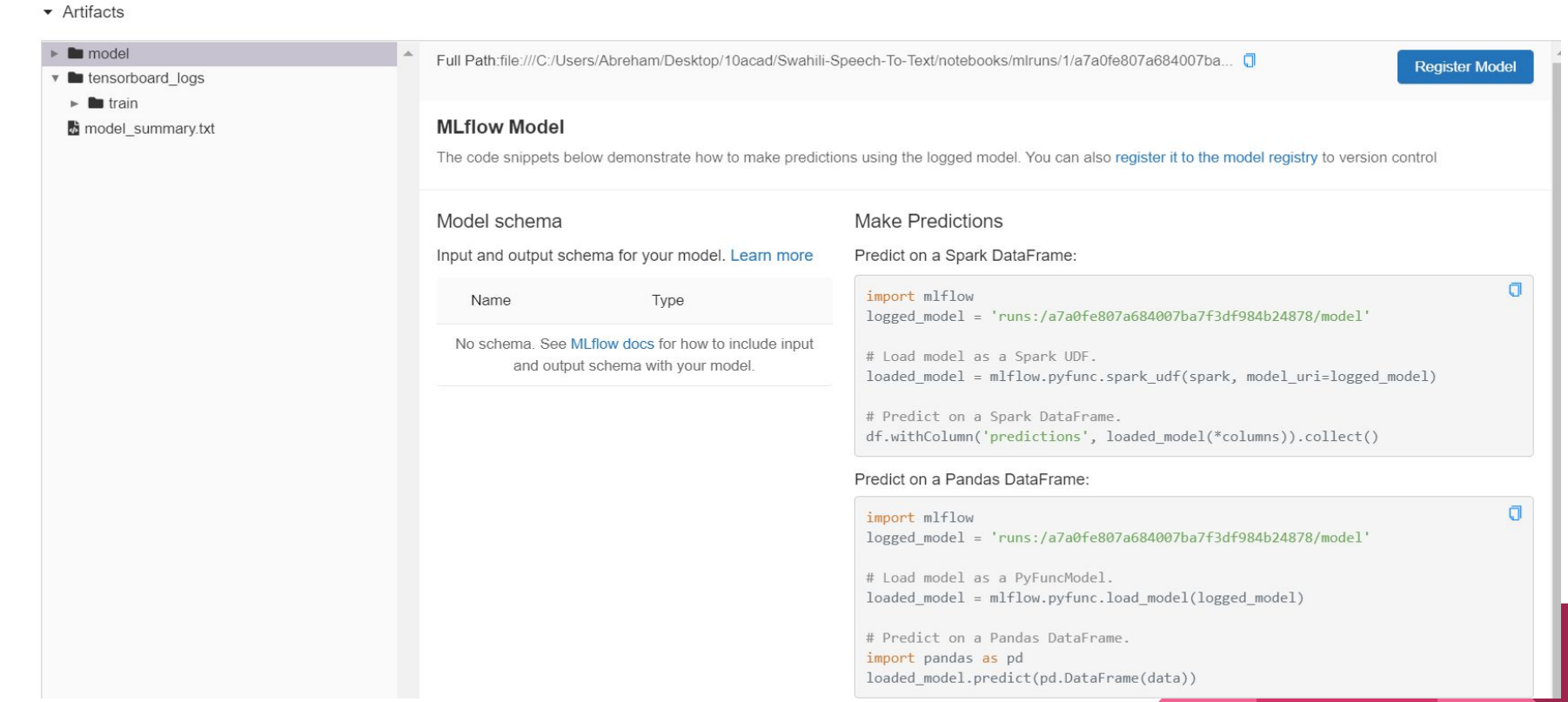
Loss Metric


mlflow
Experiments
Models
GitHub
Docs
Speech model simple rnn › Run a7a0fe807a684007ba7f3df984b24878 › loss
Points:
Off
Line Smoothness
23
X-axis:
Step
Time (Wall)
Time (Relative)
Y-axis:
loss
Y-axis Log Scale:
Off
340
320
300
280
260
240
0
20
40
60
80
100
DOWNLOAD VIDEO

Summary


127.0.0.1:5000/#/experiments/1/runs/a7a0fe807a684007ba7f3df984b24878
Artifacts
model
tensorboard_logs
model_summary.txt
Full Path:file:///C:/Users/Abreham/Desktop/10acad/Swahili-Speech-To-Text/notebooks/mlruns/1/a7a0fe807a684007ba...
Size: 2.53KB
Model: "model_5"
Layer (type) Output Shape Param # Connected to
the_input (InputLayer) [(None, None)] 0
preprocessin_model (Functional) (None, None, 128, 1) 4 the_input[0][0]
tf.compat.v1.squeeze_3 (TFOpLam (None, None, 128) 0 preprocessin_model[0][0]
input_length (InputLayer) [(None, 1)] 0
simple_rnn_model (Functional) (None, None, 30) 14400 tf.compat.v1.squeeze_3[0][0]
the_labels (InputLayer) [(None, None)] 0
lambda_5 (Lambda) (None, 1) 0 input_length[0][0]
label_length (InputLayer) [(None, 1)] 0
ctc (Lambda) (None, 1) 0 simple_rnn_model[0][0]
the_labels[0][0]
lambda_5[0][0]
label_length[0][0]
Total params: 14,404
Trainable params: 14,402
Non-trainable params: 2


127.0.0.1:5000/#/experiments/1/runs/a7a0fe807a684007ba7f3df984b24878
Artifacts
model
data
MLmodel
conda.yaml
requirements.txt
tensorboard_logs
train
model_summary.txt
Full Path:file:///C:/Users/Abreham/Desktop/10acad/Swahili-Speech-To-Text/notebooks/mlruns/1/a7a0fe807a684007ba...
Size: 348B
artifact_path: model
flavors:
keras:
data: data
keras_module: tensorflow.keras
keras_version: 2.5.0
save_format: tf
python_function:
data: data
env: conda.yaml
loader_module: mlflow.keras
python_version: 3.9.1
run_id: a7a0fe807a684007ba7f3df984b24878
utc_time_created: '2021-08-10 12:32:41.467654'


Artifacts
model
tensorboard_logs
train
model_summary.txt
Full Path:file:///C:/Users/Abreham/Desktop/10acad/Swahili-Speech-To-Text/notebooks/mlruns/1/a7a0fe807a684007ba...
Register Model
MLflow Model
The code snippets below demonstrate how to make predictions using the logged model. You can also register it to the model registry to version control
Model schema
Input and output schema for your model. Learn more
Name
Type
No schema. See MLflow docs for how to include input and output schema with your model.
Make Predictions
Predict on a Spark DataFrame:
import mlflow
logged_model = 'runs:/a7a0fe807a684007ba7f3df984b24878/model'
# Load model as a Spark UDF.
loaded_model = mlflow.pyfunc.spark_udf(spark, model_uri=logged_model)
# Predict on a Spark DataFrame.
df.withColumn('predictions', loaded_model(*columns)).collect()
Predict on a Pandas DataFrame:
import mlflow
logged_model = 'runs:/a7a0fe807a684007ba7f3df984b24878/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))