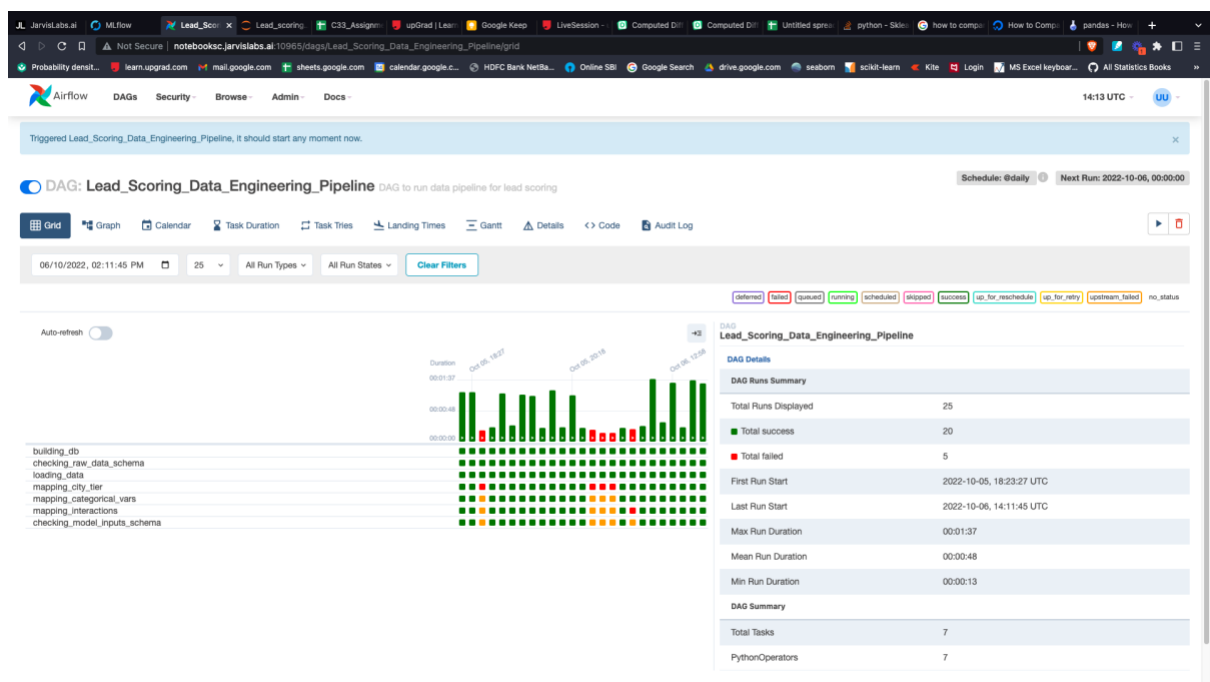
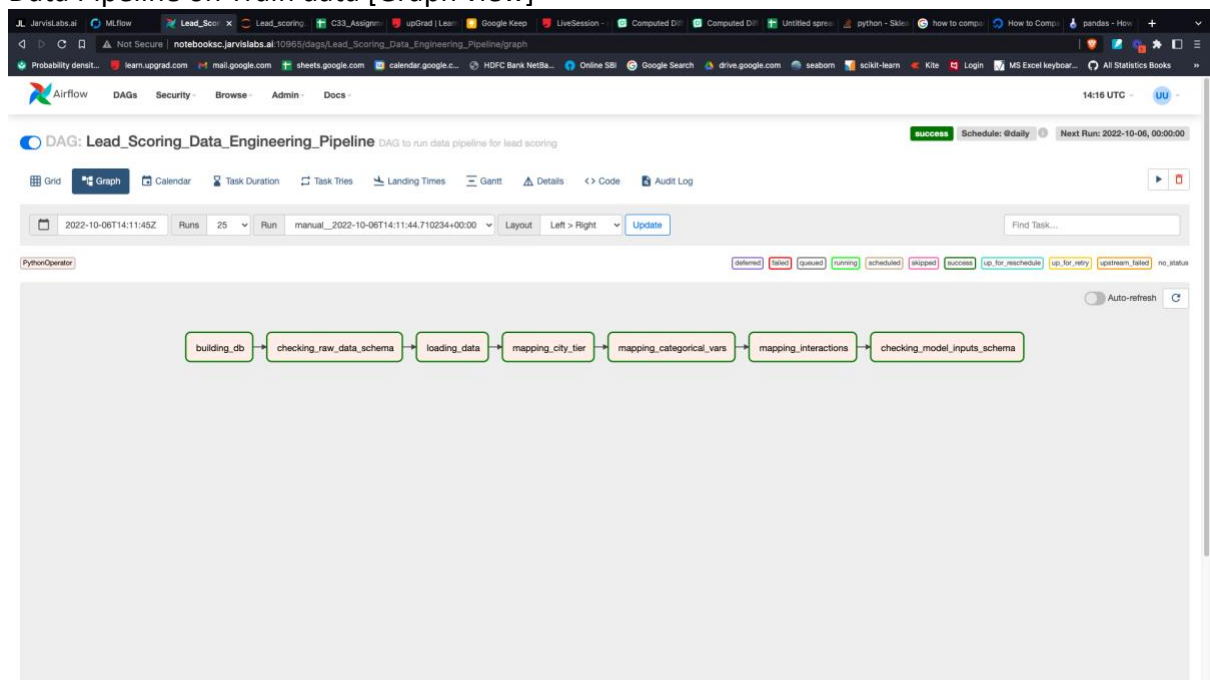


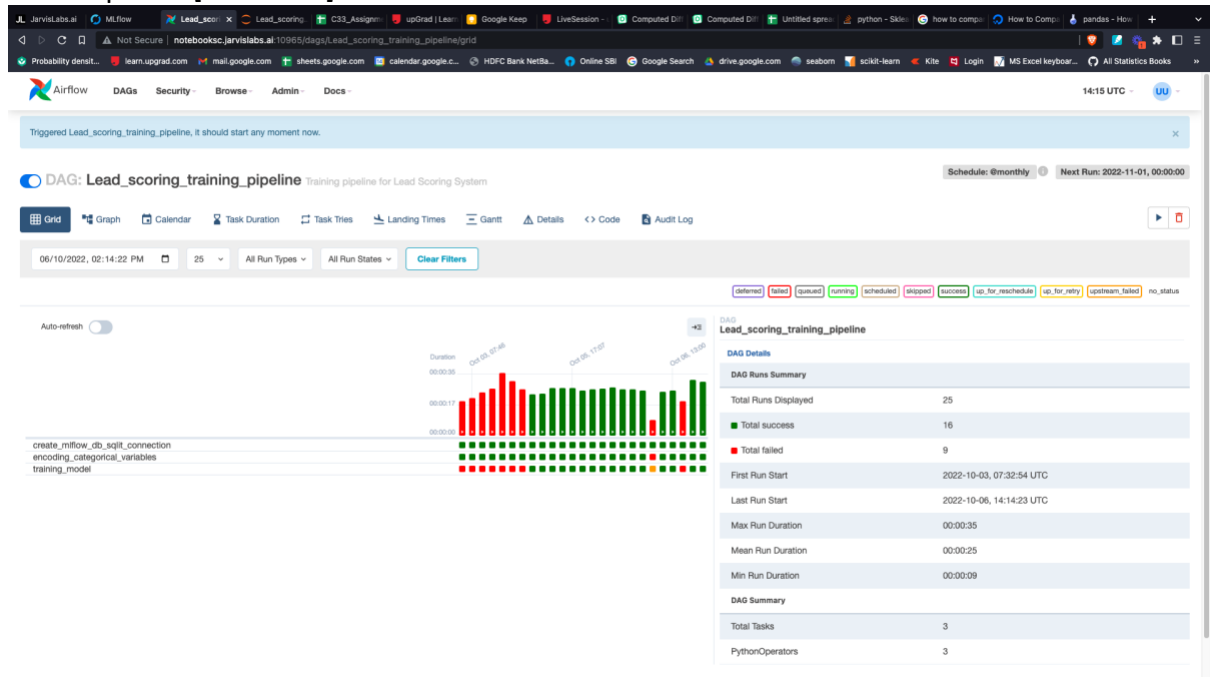
Data Pipeline on Train data [Grid view]



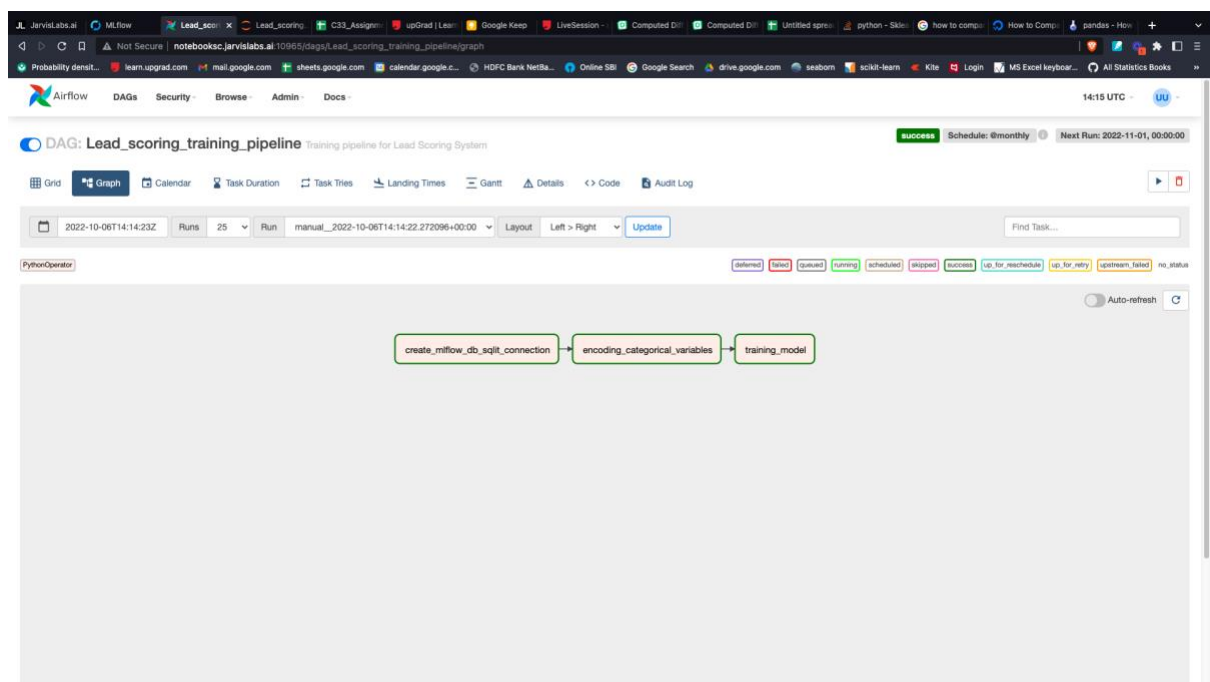
Data Pipeline on Train data [Graph view]



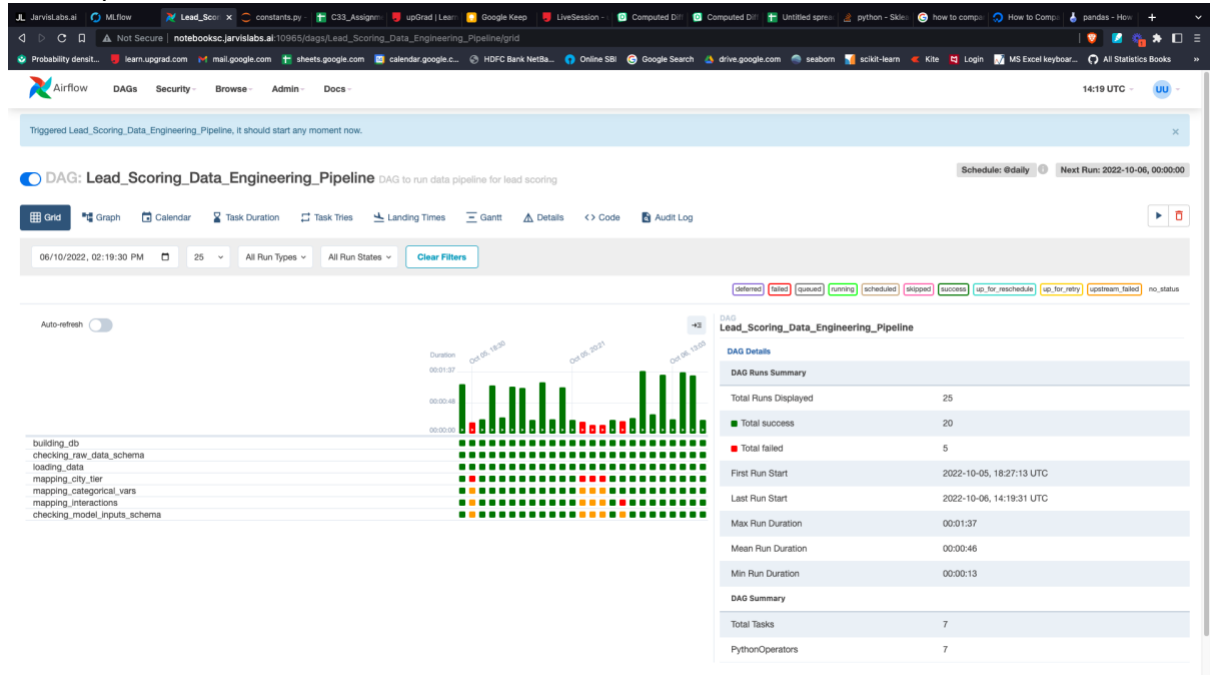
Train Pipeline [Grid view]



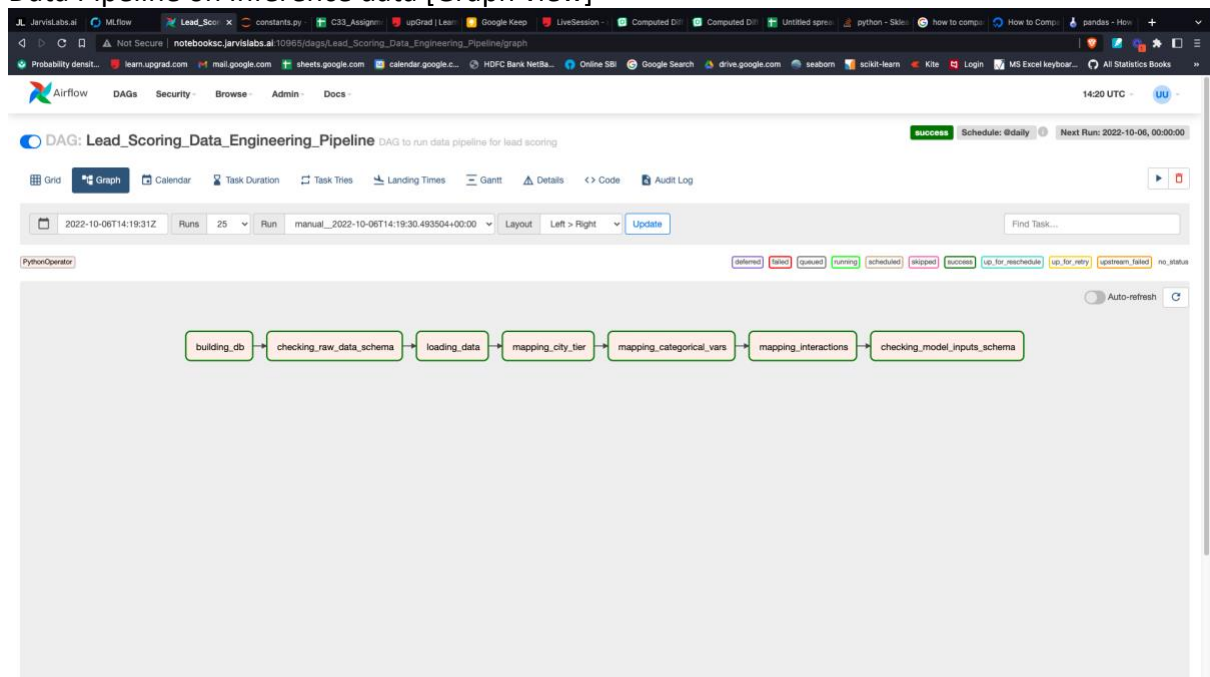
Train pipeline [Graph view]



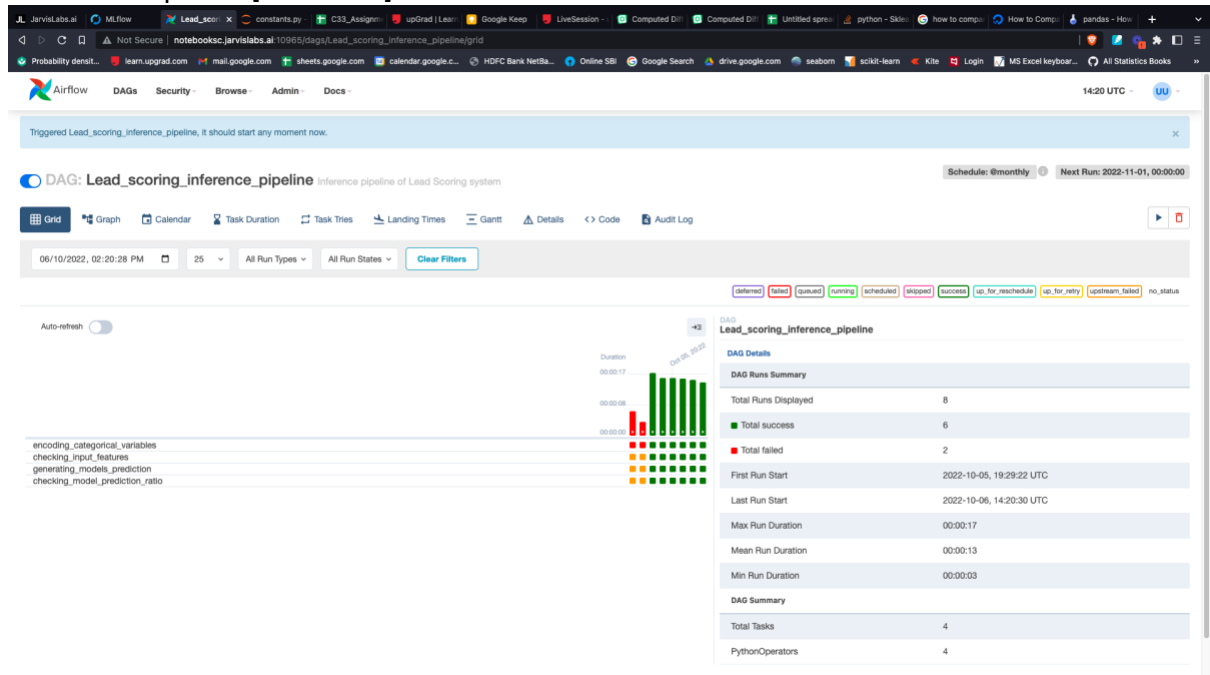
Data Pipeline on Inference data [Grid view]



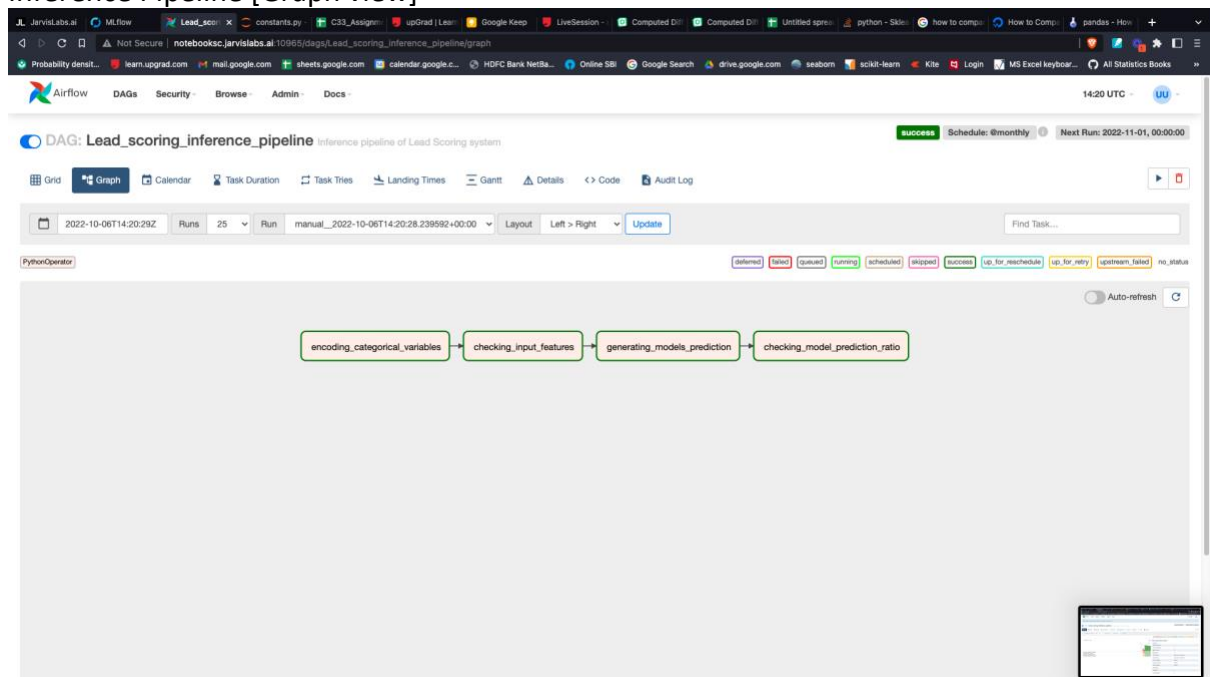
Data Pipeline on Inference data [Graph view]



Inference Pipeline [Grid view]



Inference Pipeline [Graph view]



Data, Train, Inference DAG pipelines

The screenshot shows the Apache Airflow web interface. At the top, there are navigation tabs: DAGs, Security, Browse, Admin, and Docs. Below the tabs, there are two yellow warning banners. The first banner states: "Do not use SQLite as metadata DB in production -- it should only be used for dev/testing. We recommend using Postgres or MySQL. Click here for more information." The second banner states: "Do not use SequentialExecutor in production. Click here for more information." Below the banners, the "DAGs" section is displayed. It includes a filter bar with "All 35", "Active 3", and "Paused 32" buttons, and a search bar labeled "Search DAGs". The main table lists various DAGs with columns for DAG name, Owner, Runs, Schedule, Last Run, Next Run, Recent Tasks, Actions, and Links. The DAGs listed include "Lead_Scoring_Data_Engineering_Pipeline", "Lead_scoring_inference_pipeline", "Lead_scoring_training_pipeline", and several "example_" DAGs.

DAG	Owner	Runs	Schedule	Last Run	Next Run	Recent Tasks	Actions	Links
Lead_Scoring_Data_Engineering_Pipeline	upgrad_demo	17	Daily	2022-10-06, 14:19:30	2022-10-06, 00:00:00	...	▶ ⏏	...
Lead_scoring_inference_pipeline	upgrad_demo	4	Daily	2022-10-06, 14:20:28	2022-11-01, 00:00:00	...	▶ ⏏	...
Lead_scoring_training_pipeline	upgrad_demo	17	Daily	2022-10-06, 14:14:22	2022-11-01, 00:00:00	...	▶ ⏏	...
example_branch_operator	airflow	...	Daily	...	2022-10-05, 00:00:00	...	▶ ⏏	...
example_branch_datetime_operator	airflow	...	Daily	...	2022-10-05, 00:00:00	...	▶ ⏏	...
example_branch_datetime_operator_2	airflow	...	Daily	...	2022-10-05, 00:00:00	...	▶ ⏏	...
example_branch_dop_operator_v3	airflow	...	Daily	...	2022-10-06, 14:19:00	...	▶ ⏏	...
example_branch_labels	airflow	...	Daily	...	2022-10-05, 00:00:00	...	▶ ⏏	...
example_branch_operator	airflow	...	Daily	...	2022-10-05, 00:00:00	...	▶ ⏏	...
example_branch_python_operator_decorator	airflow	...	Daily	...	2022-10-05, 00:00:00	...	▶ ⏏	...
example_complex	airflow	...	None	▶ ⏏	...

MLFlow experiment overview

The screenshot shows the MLFlow web interface. At the top, there are navigation tabs: Experiments and Models. Below the tabs, there is a search bar labeled "Search Experiments". The main section displays the "Lead_Scoring_mlflow_production" experiment. It includes a description, a table of runs, and a "Load more" button. The table has columns for Start Time, Duration, Run Name, User, Source, Version, Models, Metrics (AUC score, False Negative, False Positive), and Parameters (boosting_type, class_weight, colsample_byt).

Start Time	Duration	Run Name	User	Source	Version	Models	AUC score	False Negative	False Positive	boosting_type	class_weight	colsample_byt
2 minutes ago	9.9s	run_LightGB	root	airflow	-	LightGBM/12	0.738	5870	12829	gbdt	None	1.0
1 hour ago	11.6s	run_LightGB	root	airflow	-	LightGBM/11	0.738	5870	12829	gbdt	None	1.0
1 hour ago	37ms	run_LightGB	root	airflow	-	-	-	-	-	-	-	-
1 hour ago	7.0s	run_LightGB	root	airflow	-	LightGBM/10	0.738	5870	12829	gbdt	None	1.0
16 hours ago	5.1s	run_LightGB	root	airflow	-	LightGBM/9	0.738	5870	12829	gbdt	None	1.0
17 hours ago	5.4s	run_LightGB	root	airflow	-	LightGBM/8	0.738	5870	12829	gbdt	None	1.0
18 hours ago	5.5s	run_LightGB	root	airflow	-	LightGBM/7	0.738	5870	12829	gbdt	None	1.0
18 hours ago	5.5s	run_LightGB	root	airflow	-	LightGBM/6	0.738	5870	12829	gbdt	None	1.0
18 hours ago	5.6s	run_LightGB	root	airflow	-	LightGBM/5	0.738	5870	12829	gbdt	None	1.0
19 hours ago	5.3s	run_LightGB	root	airflow	-	LightGBM/4	0.738	5870	12829	gbdt	None	1.0
19 hours ago	5.3s	run_LightGB	root	airflow	-	LightGBM/3	0.738	5870	12829	gbdt	None	1.0
19 hours ago	5.0s	run_LightGB	root	airflow	-	LightGBM/2	0.738	5870	12829	gbdt	None	1.0
21 hours ago	5.6s	run_LightGB	root	airflow	-	LightGBM/1	0.738	5870	12829	gbdt	None	1.0

MLFlow model metrics

The screenshot shows the MLFlow web interface for a specific run named 'run_LightGB'. The interface includes a header with the MLFlow logo and navigation tabs for 'Experiments' and 'Models'. Below the header, the run details are displayed, including the date (2022-10-06 19:44:42), source (airflow), user (root), and status (FINISHED). The 'Metrics (9)' section is expanded, showing a table of metrics:

Name	Value
AUC score	0.738
False Negative	5870
False Positive	12829
Precision score	0.738
Recall score	0.749
True Negative	22758
True Positive	30233
F1	0.764
test_accuracy	0.739

The 'Artifacts' section is also expanded, showing a list of files: 'MLmodel', 'conda.yaml', and 'model.pkl'. The full path for the artifacts is displayed as 'Full Path:/home/minrums/1/125db718bbd4b34a66b778bbe796d5e/artifacts/models'.

Before moving model to Production stage in MLFlow

The screenshot shows the MLFlow web interface for the 'Registered Models' page. The interface includes a header with the MLFlow logo and navigation tabs for 'Experiments' and 'Models'. Below the header, the 'Registered Models' section is displayed, showing a table of models:

Name	Latest Version	Staging	Production	Last Modified	Tags
LightGBM	Version 12	--	--	2022-10-06 19:44:52	--

The 'Create Model' button is visible at the top left of the Registered Models section. The 'Search by model name' input field is also present.

After moving model to Production stage in MLFlow

The screenshot shows the MLFlow web interface. The top navigation bar includes 'mlflow 1.26.1', 'Experiments', and 'Models'. The breadcrumb trail is 'Registered Models > LightGBM'. The model name 'LightGBM' is displayed with a help icon. Below this, the 'Created Time' is '2022-10-05 22:38:22' and the 'Last Modified' time is '2022-10-06 19:47:26'. There are links for 'Description' and 'Edit'. A 'Tags' section is also present. The 'Versions' section shows a list of 12 versions. The first version, 'Version 12', is highlighted with a green 'Production' label in the 'Stage' column. The other versions are labeled 'None'. The table has columns for 'Version', 'Registered at', 'Created by', 'Stage', and 'Description'. At the bottom right, there is a pagination control showing '1' of 2 pages.

Registered Models > LightGBM

LightGBM

Created Time: 2022-10-05 22:38:22 Last Modified: 2022-10-06 19:47:26

Description Edit

Tags

Versions All Active 1 Compare

Version	Registered at	Created by	Stage	Description
Version 12	2022-10-06 19:44:52		Production	
Version 11	2022-10-06 18:42:11		None	
Version 10	2022-10-06 18:30:36		None	
Version 9	2022-10-06 02:47:05		None	
Version 8	2022-10-06 01:50:25		None	
Version 7	2022-10-06 01:23:30		None	
Version 6	2022-10-06 01:07:37		None	
Version 5	2022-10-06 00:56:41		None	
Version 4	2022-10-06 00:28:14		None	
Version 3	2022-10-05 23:59:15		None	

< 1 2 >