

2348521

Ismail Basheer

Lab-8

The image shows a browser window with multiple tabs. The active tab is 'console.cloud.google.com/marketplace/browse?project=genuine-hold-433304-b48q=bikes'. The page displays search results for 'bikes' in the Google Cloud Marketplace. Three results are shown: 'San Francisco Ford GoBike Share', 'NYC Citi Bike Trips', and 'Advanced Smart City - Intelligent Traffic Management 2.0'. The 'NYC Citi Bike Trips' result is highlighted, and its product details page is shown below. The product details page includes an overview, samples, and related products. The overview section describes the dataset as 'New York City bike share trips since 2013' and provides a 'VIEW DATASET' button. The additional details section lists the type as 'Data', category as 'Encyclopedic', dataset source as 'Citi Bike New York', cloud service as 'BigQuery', and expected update frequency as 'Monthly'. A notification banner at the bottom of the product details page states 'Now viewing project "My Project 26677" in organization "science.christianuniversity.in"'. The browser window also shows a 'Start your Free Trial with \$300 in credit' banner at the top.

Marketplace

3 results

San Francisco Ford GoBike Share
City and County of San Francisco - Data
San Francisco Ford GoBike, managed by Motivate, provides the Bay Area's bike share system. Bike share is a convenient, healthy, affordable, and fun form of transportation. It involves a fleet of specially designed bikes that are locked into a network of docking stations. Bikes can be unlocked from one station and returned to any other station in the system. People use bike share to commute to work or school, run errands, ge...

NYC Citi Bike Trips
City of New York - Data
Citi Bike is the nation's largest bike share program, with 10,000 bikes and 600 stations across Manhattan, Brooklyn, Queens, and Jersey City. This dataset includes Citi Bike trips since Citi Bike launched in September 2013 and is updated daily. The data has been processed by Citi Bike to remove trips that are taken by staff to service and inspect the system, as well as any trips below 60 seconds in length, which are considered false starts.

Advanced Smart City - Intelligent Traffic Management 2.0
Dace IT™ d/b/a Sense Traffic Pulse™ - SaaS & APIs
Advanced Smart City - Intelligent Traffic Management 2.0 is a SaaS & API solution that provides real-time traffic data and analytics. It is designed to help cities improve traffic flow, reduce congestion, and enhance public safety. In today's world, traffic congestion is a major problem for cities. It causes delays, increases fuel consumption, and contributes to air pollution. By using traffic data and analytics, cities can identify problem areas and implement solutions to improve traffic flow. This solution provides real-time traffic data and analytics, allowing cities to make data-driven decisions to improve traffic flow and reduce congestion.

NYC Citi Bike Trips
City of New York
New York City bike share trips since 2013

[VIEW DATASET](#)
Click to view dataset

Overview

Citi Bike is the nation's largest bike share program, with 10,000 bikes and 600 stations across Manhattan, Brooklyn, Queens, and Jersey City. This dataset includes Citi Bike trips since Citi Bike launched in September 2013 and is updated daily. The data has been processed by Citi Bike to remove trips that are taken by staff to service and inspect the system, as well as any trips below 60 seconds in length, which are considered false starts.

This public dataset is hosted in Google BigQuery and is included in BigQuery's 1TB/mo of free tier processing. This means that each user receives 1TB of free BigQuery processing every month, which can be used to run queries on this public dataset. Watch this short video to learn how to get started quickly using BigQuery to access public datasets. [What is BigQuery](#)

Additional details

Type: [Data](#)
Category: [Encyclopedic](#)
Dataset source: [Citi Bike New York](#)
Cloud service: BigQuery
Expected update frequency: Monthly

Now viewing project "My Project 26677" in organization "science.christianuniversity.in"

You are signed in as 2348521

Lab - 8

Building Demand Forecasting v

NYC Citi Bike Trips - Marketpl

new_york_citibike -

BigQuery - My Project 26677 -

console.cloud.google.com/bigquery?p=bigquery-public-data&d=new_york_citibike&page=dataset&project=genuine-hold-433304-b4&ws=!1m4!1m3!1sbigquery-public-data!2sne...

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DISMISS

START FREE

Google Cloud

My Project 26677

Search (/) for resources, docs, products, and more

Search

BigQuery

Explorer

+ ADD

UNTITLED QUERY

new_york_citibike

CREATE TABLE

SHARING

COPY

DELETE

REFRESH

Analysis

BigQuery Studio

Data transfers

Scheduled queries

Analytics Hub

Dataform

Partner Center

Orchestration

Migration

Assessment

SQL translation

Administration

Monitoring

Release Notes

Search BigQuery resources

VIEWING RESOURCES

SHOW STARRED ONLY

ecmwf_era5_reanalysis

☆

:

epa_historical_air_quality

☆

:

ethereum_blockchain

☆

:

etsi_technical_standards

☆

:

faa

☆

:

fcc_political_ads

☆

:

fda_drug

☆

:

fda_food

☆

:

fdic_banks

☆

:

new_york_citibike

☆

:

SUMMARY

new_york_citibike

bigquery-public-data

Data location

US

Last modified

Sep 20, 2022, 1:14:20 PM UTC+5:30

Dataset info

EDIT DETAILS

Dataset ID

bigquery-public-data/new_york_citibike

Created

Apr 11, 2017, 6:47:32 PM UTC+5:30

Default table expiration

Never

Last modified

Sep 20, 2022, 1:14:20 PM UTC+5:30

Data location

US

Description

Default collation

Default rounding mode

ROUNDING_MODE_UNSPECIFIED

Case insensitive

false

Labels

Tags

Dataset replica info

PREVIEW

VIEW REPLICAS

Primary location

US

Job history

REFRESH

UNTITLED QUERY

RUN

SAVE

DOWNLOAD

SHARE

SCHEDULE

MORE

```
1 SELECT
2   bikeid,
3   starttime,
4   start_station_name,
5   end_station_name,
6 FROM
7   bigquery-public-data.new_york_citibike.citibike_trips
8 WHERE starttime is not null
9 LIMIT 5
```

Job history

REFRESH

Start your Free Trial with \$300 in credit. Don't worry—you won't be charged if you run out of credits. [Learn more](#)

DISMISS **START FREE**

Google Cloud My Project 26677 Search (/) for resources, docs, products, and more

BigQuery Explorer

Analysis

- BigQuery Studio
- Data transfers
- Scheduled queries
- Analytics Hub
- Dataform
- Partner Center
- Orchestration

Migration

- Assessment
- SQL translation

Administration

- Monitoring
- Release Notes

Search BigQuery resources

Viewing resources. SHOW STARRED ONLY

- ecmwf_era5_reanalysis
- epa_historical_air_quality
- ethereum_blockchain
- etsi_technical_standards
- faa
- fcc_political_ads
- fda_drug
- fda_food
- fdic_banks
- new_york_citibike

SHOW MORE

SUMMARY

Nothing currently selected

Untitled query

```
1 SELECT
2   bikeid,
3   starttime,
4   start_station_name,
5   end_station_name,
6 FROM
7   `bigquery-public-data.new_york_citibike.citibike_trips`
8 WHERE starttime is not null
9 LIMIT 5
```

Query results

JOB INFORMATION RESULTS CHART JSON EXECUTION DETAILS EXECUTION GRAPH

Row	bikeid	starttime	start_station_name	end_station_name
1	31876	2017-10-01T09:16:46	WS Don't Use	Newport PATH
2	14924	2014-07-31T23:46:38	W 52 St & 5 Ave	W 52 St & 5 Ave
3	17537	2014-12-11T11:35:12	W 52 St & 5 Ave	W 52 St & 5 Ave
4	18536	2017-07-23T17:58:27	W 52 St & 5 Ave	W 52 St & 5 Ave
5	18126	2015-08-23T11:13:12	W 52 St & 5 Ave	W 52 St & 5 Ave

Results per page: 50 1 - 5 of 5

Job history

Google Cloud Skills Boost

Applying BigQuery ML's Classification, Regression, and Demand Forecasting for Retail Applications > Applying BQML's Classification, Regression, and Demand Forecasting for Retail Applications

bigquery is great for answering questions through data. Learning the query syntax will assist in providing insight through data.

Thinking about the query that was just run...

What's the purpose of the LIMIT keyword?

- ☐ Helps to GROUP items
- ☒ LIMIT the number of results returned
- ☐ Filters on a keyword
- ☐ Performs CPU autoscaling

Submit

Try another type of query. In some instances, it may be useful to filter a dataset to present a more granular view.

End Lab 00:42:24

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Open Google Cloud Console

Username

student-00-b8fd8d6d4b1

Password

c8pPPUJVtLWP

Project ID

qw1klabs-gcp-01-5d08d3f

Lab instructions and tasks 0/100

GSP852

Overview

Set up your environment

Task 1. Explore the NYC Citi Bike Trips dataset

Task 2. Cleaned training data

Task 3. Training a model

Task 4. Evaluate the time series model

Task 5. Make predictions using the model

Task 6. Other datasets to explore

Previous Next

Google Cloud BigQuery interface showing a query execution result. The query is:

```
3 | start_station_id,
4 | COUNT(*) as total_trips
5 | FROM
6 | `bigquery-public-data.new_york_citibike.citibike_trips`
7 | WHERE
8 | starttime BETWEEN DATE('2016-01-01') AND DATE('2017-01-01')
9 | GROUP BY
10 | start_station_id, start_date
11 | LIMIT 5
```

The query results are displayed in a table:

Row	start_date	start_station_id	total_trips
1	2016-02-19	488	105
2	2016-09-14	323	115
3	2016-07-18	3230	267
4	2016-08-02	459	384
5	2016-08-10	442	216

Google Cloud Skills Boost interface showing a lab completion screen. The lab is titled "Applying BQML's Classification, Regression, and Demand Forecasting for Retail Applications". The test completed task is:

Building queries involves learning commands to manipulate the data. Based on the last query you can now group the trips by date and station name.

How would you display the time element of a TIMESTAMP?

- ☐ CAST(...)
- ☐ CONVERT(...)
- ☒ TIME FROM TIMESTAMP(...)
- ☐ AVG(...)

Submit

Click Check my progress to verify the objective.

Navigation buttons: Previous, Next

Google Cloud console.cloud.google.com/bigquery?referrer=search&project=genuine-hold-433304-b4&ws=1m0

Start your Free Trial with \$300 in credit. Don't worry—you won't be charged if you run out of credits. [Learn more](#)

Google Cloud My Project 26677 big

Explorer + ADD < Search BigQuery resources

Viewing resources. SHOW STARRED ONLY

genuine-hold-433304-b4 ☆

SUMMARY Nothing currently selected

Welcome to BigQuery Studio!

Create new

SQL QUERY PYTHON NOTEBOOK DATA CANVAS

Try with sample data

Try the Google Trends Demo Query

This simple query generates the top search terms in the US from the Google Trends dataset.

OPEN THIS QUERY VIEW DATASET

Try the Colab Demo Notebook

This notebook walks you through their basics and showcases BigQuery Colab.

OPEN THIS NOTEBOOK

Add your own data

Job history

Create dataset

Project ID * genuine-hold-433304-b4 CHANGE

Dataset ID *

Letters, numbers, and underscores allowed

Location type

Region Specify a region to colocate your datasets with other Google Cloud services.

Multi-region Allow BigQuery to select a region within a group to achieve higher quota limits.

Multi-region * US (multiple regions in United States)

Default table expiration

Enable table expiration

Default maximum table age Days

Tags

Advanced options

CREATE DATASET CANCEL

cloudskillsboost.google/course_templates/673/labs/459529

Google Cloud Dashboard Paths Explore Profile Subscriptions 10 pts

Google Cloud Skills Boost

Applying BigQuery ML's Classification, Regression, and Demand Forecasting for Retail Applications > Applying BQML's Classification, Regression, and Demand Forecasting for Retail Applications

TIME FROM TIMESTAMP(...)

Submit

Click **Check my progress** to verify the objective.

Explore the NYC Citi Bike Trips dataset

Check my progress

Assessment Completed!

Task 2. Cleaned training data

From the last exercise, you saw how you can access data, create test, training, and the

End Lab 00:55:48

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Open Google Cloud Console

Username student-00-ae18a9546691

Password w3SjDfZ174dS

Project ID qw1klabs-gcp-02-c768c2

Lab instructions and tasks 20/100

GSP852

Overview

Set up your environment

Task 1. Explore the NYC Citi Bike Trips dataset

Task 2. Cleaned training data

Task 3. Training a model

Task 4. Evaluate the time series model

Task 5. Make predictions using the model

Task 6. Other datasets to explore

Previous Next

Create dataset - BigQuery - qwiklabs-gcp-02-c768c2327a6d

Google Cloud

BigQuery

Explorer

new_york_citibike
bigquery-public-data

Data location: US

Last modified: Sep 20, 2022 1:14:20 PM

Create dataset

Project ID: qwiklabs-gcp-02-c768c2327a6d

Dataset ID: bqmf1forecast

Location type: Multi-region (US)

Default table expiration: 1 day

Tags:

Advanced options:

CREATE DATASET CANCEL

cloudskillsboost.google/course_templates/673/labs/459529

Google Cloud

Google Cloud Skills Boost

Course: Applying BigQuery...

Create a dataset

20/100

1. Click on the three dots next to your project that starts with "qwiklabs" to see the Create Dataset option.

2. Select Create Dataset.

3. Enter the dataset name as bqmf1forecast.

4. Check the box for Enable table expiration and enter 1 day for Default maximum table age

5. Select the Create dataset button.

You now have a dataset in which to host your data.

Create the table

Unfortunately you do not currently have any data created. Correct that by running

Previous Next

console.cloud.google.com/bigquery?p=bigquery-public-data&d...

Google Cloud

BigQuery

Explorer

new_york_citibike
bigquery-public-data

Data location: US

Last modified: Aug 22, 2024 11:26:34 AM UTC

Dataset info

Dataset ID: qwiklabs-gcp-02-c768c2327a6d.bqmf1forecast

Created: Aug 22, 2024, 11:26:34 AM UTC+5:30

Default table expiration: 1 day

Last modified: Aug 22, 2024, 11:26:34 AM UTC+5:30

Data location: US

Description:

Default collation:

Default rounding mode: ROUNDING_MODE_UNSPECIFIED

Case insensitive: false

Labels:

Tags:

Dataset replica info

Primary location: US

GO TO DATASET

cloudskillsboost.google/course_templates/673/labs/459529

Google Cloud

Google Cloud Skills Boost

Course: Applying BigQuery...

Create the table

20/100

1. Click the + (Create SQL query) button.

2. Run the following query to generate some data:

SELECT
DATE(starttime) AS trip_date,
start_station_id,
COUNT(*) AS num_trips
FROM
`bigquery-public-data.new_york_citibike.citibike_trips`
WHERE
starttime BETWEEN DATE('2014-01-01') AND ('2016-01-01')
AND start_station_id IN (521,435,497,293,519)
GROUP BY
start_station_id,

Previous Next

BigQuery - qwiklabs-gcp-02-c768c2327a6d

console.cloud.google.com/bigquery?p=bigquery-public-data&id...

Google Cloud

qwiklabs-gcp-02-c768c2327a6d

BigQuery

Explorer

CSV (Google Drive)
Save up to 1GB as CSV to Google Drive.

CSV (local file)
Save up to 10MB as CSV locally.

JSON (local file)
Save up to 10MB as JSON locally.

JSONL (newline delimited)
Save up to 1GB as newline delimited JSON to Google Drive.

BigQuery table
Save results as a BigQuery table.

Google Sheets
Save up to 10MB to Google Sheets.

Copy to Clipboard
Copy up to 1MB to the clipboard.

Query results

SAVE RESULTS

Job information

RESULTS

CHART

JS

Row

trip_date

start_station_id

num_trips

1

2015-03-07

497

52

2

2014-06-21

497

321

3

2014-09-15

497

369

4

2014-09-28

497

267

5

2014-07-06

497

236

6

2014-10-13

497

252

Results per page: 50

1 - 50 of 3618

Job history

REFRESH

Google Cloud Skills Boost

Course > Applying BigQuery...

start_station_id,
trip_date

20/100

Note: The IN clause chooses just 5 of the stations to include in the model to reduce the size of the training data. Training a full model requires more time than is available for this lab. You can now use this query as the basis for training our model.

3. Select SAVE RESULTS .

4. In the dropdown menu, select BigQuery Table.

5. For Dataset select bqmlforecast.

6. Add a Table name training_data .

7. Click Save.

Click Check my progress to verify the objective.

Cleaned training data

Previous

Next

BigQuery - qwiklabs-gcp-02-c768c2327a6d

console.cloud.google.com/bigquery?p=bigquery-public-data&id...

Google Cloud

qwiklabs-gcp-02-c768c2327a6d

BigQuery

Explorer

Search BigQuery resources

Viewing resources.

SHOW STARRED ONLY

qwiklabs-gcp-02-c768c2327a6d

bqmlforecast

training_data

SHOW MORE

bigquery-public-data

Untitled query

RUN

SAVE

1 SELECT

2 DATE(starttime) AS trip_date,

3 start_station_id,

4 COUNT(*) AS num_trips

5 FROM

6 | bigquery-public-data.new_york_citibike.

7 citibike_trips

8 WHERE

9 starttime BETWEEN DATE('2014-01-01') AND

10 ('2016-01-01')

11 AND start_station_id IN (521,435,497,293,519)

12 GROUP BY

13 start_station_id,

14 trip_date

Query results

SAVE RESULTS

Job information

RESULTS

CHART

JS

Row

trip_date

start_station_id

num_trips

1

2015-03-07

497

52

2

2014-06-21

497

321

3

2014-09-15

497

369

4

2014-09-28

497

267

5

2014-07-06

497

236

6

2014-10-13

497

252

Results per page: 50

1 - 50 of 3618

Job history

REFRESH

Query result exported.

GO TO TABLE

Google Cloud Skills Boost

Course > Applying BigQuery...

the size of the training data. Training a full model requires more time than is available for this lab. You can now use this query as the basis for training our model.

40/100

3. Select SAVE RESULTS .

4. In the dropdown menu, select BigQuery Table.

5. For Dataset select bqmlforecast.

6. Add a Table name training_data .

7. Click Save.

Click Check my progress to verify the objective.

Cleaned training data

Check my progress

Assessment Completed!

Previous

Next

Google Cloud

qwiklabs-gcp-02-c768c2327a6d

BigQuery

Explorer

Search BigQuery resources

Viewing resources.

SHOW STARRED ONLY

qwiklabs-gcp-02-c768c2327a6d

bqmlforecast

Models (1)

bike_model

training_data

bigquery-public-data

SUMMARY

bike_model

qwiklabs-gcp-02-c768c2327a6d.bqmlforecast

Last modified: Aug 22, 2024, 11:31:11 AM UTC+5:30

Data location: US

bike_model

DETAILS TRAINING EVALUATION SCHEMA

Model type: ARIMA

Data location: US

Model Details

EDIT

Model ID: qwiklabs-gcp-02-c768c2327a6d.bqmlforecast.bike_model

Description

Date created: Aug 22, 2024, 11:31:03 AM UTC+5:30

Model expiration: Aug 23, 2024, 11:31:03 AM UTC+5:30

Date modified: Aug 22, 2024, 11:31:11 AM UTC+5:30

Data location: US

Model type: ARIMA

Training Options

Training options are the optional parameters that were added in the script to create this model.

Job history

REFRESH

Google Cloud

cloudskillsboost.google/course_templates/673/labs/459529

Google Cloud Skills Boost

Course

Applying BigQuery...

automatic hyper-parameter tuning. In auto.ARIMA, dozens of candidate models are trained and evaluated in parallel, which include p,d,q and drift. The best model comes with the lowest Akaike information criterion (AIC).

40/100

You can train a time series model to forecast a single item, or forecast multiple items at the same time (which is really convenient if you have thousands or millions of items to forecast).

To forecast multiple items at the same time, different pipelines are run in parallel.

In this example, since you are training the model on multiple stations in a single model creation statement, you will need to specify the parameter TIME_SERIES_ID_COL as start_station .

bike_model

QUERY MODEL

DETAILS TRAINING EVALUATION SCHEMA

Model type: ARIMA

Data location: US

Previous

Next

Google Cloud

qwiklabs-gcp-02-c768c2327a6d

BigQuery

Explorer

Search BigQuery resources

Viewing resources.

SHOW STARRED ONLY

qwiklabs-gcp-02-c768c2327a6d

bqmlforecast

Models (1)

bike_model

training_data

bigquery-public-data

SUMMARY

Nothing currently selected

Untitled query

RUN SAVE

```
1 CREATE OR REPLACE MODEL bqmlforecast.bike_model
2 OPTIONS(
3   MODEL_TYPE='ARIMA',
4   TIME_SERIES_TIMESTAMP_COL='trip_date',
5   TIME_SERIES_DATA_COL='num_trips',
6   TIME_SERIES_ID_COL='start_station_id',
7   HOLIDAY_REGION='US'
8 ) AS
9 SELECT
10   trip_date,
11   start_station_id,
12   num_trips
13 FROM
14   bqmlforecast.training_data
```

Query results

SAVE RESULTS

JOB INFORMATION RESULTS EXECUTION DETAILS

Successfully created (or replaced) model named bike_model.

GO TO MODEL

Job history

REFRESH

Google Cloud

cloudskillsboost.google/course_templates/673/labs/459529

Google Cloud Skills Boost

Course

Applying BigQuery...

automatic hyper-parameter tuning. In auto.ARIMA, dozens of candidate models are trained and evaluated in parallel, which include p,d,q and drift. The best model comes with the lowest Akaike information criterion (AIC).

40/100

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In this example, since you are training the model on multiple stations in a single model creation statement, you will need to specify the parameter TIME_SERIES_ID_COL as start_station .

bike_model

QUERY MODEL

DETAILS TRAINING EVALUATION SCHEMA

Model type: ARIMA

Data location: US

Previous

Next

Google Cloud Skills Boost

Applying BigQuery ML's Classification, Regression, and Demand Forecasting for Retail Applications > Applying BQML's Classification, Regression, and Demand Forecasting for Retail Applications

End Lab 00:46:57

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

[Open Google Cloud Console](#)

Username

student-80-ae18a0546691

Password

w3Sj0Fz174dS

Project ID

qwiklabs-gcp-02-c768c2f

What type of tuning is performed by the ARIMA algorithm?

☒ Hyper-parameter

☐ Loess STL

☐ Drift regression

☐ Exponential smoothing

Submit

Click **Check my progress** to verify the objective.

Training a Model

[Check my progress](#)

Assessment Completed!

Lab instructions and tasks 40/100

GSP852

Overview

Set up your environment

Task 1. Explore the NYC Citi Bike Trips dataset

Task 2. Cleaned training data

Task 3. Training a model

Task 4. Evaluate the time series model

Task 5. Make predictions using the model

Task 6. Other datasets to explore

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BigQuery - qwiklabs-gcp-02-c768c2f

console.cloud.google.com/bigquery?project=bigquery-public-data&dataset=new_york_citibike&page=dataset&authuser=1&project=qwiklabs-gcp-02-c768c2f&supportedpurview=project&w=1000

Google Cloud qwiklabs-gcp-02-c768c2f Search (/) for resources, docs, products, and more

BigQuery Explorer

Analysis

- BigQuery Studio
- Data transfers
- Scheduled queries
- Analytics Hub
- Dataform
- Partner Center
- Orchestration

Migration

- Assessment
- SQL translation

Administration

- Monitoring
- Jobs explorer
- Release Notes

Viewing resources. SHOW STARRED ONLY

- qwiklabs-gcp-02-c768c2f7a6d
 - bqmlforecast
 - Models (1)
 - bike_model
 - training_data
 - bigquery-public-data

Untitled query

```
1 SELECT
2 *
3 FROM
4 ML_EVALUATE(MODEL bqmlforecast.bike_model)
```

Query results

Row	start_station_id	non_seasonal_p	non_seasonal_d	non_seasonal_q	has_drift	log_likelihood	AIC	variance
1	293	0	1	5	false	-3574.66737363...	7161.334747277...	1048.854211...
2	435	0	1	5	false	-3408.34620403...	6828.692408079...	667.9239546...
3	497	0	1	5	false	-3546.30207695...	7104.6041539015	972.3036784...

Results per page: 50 1 - 5 of 5

Job history

Google Cloud

qwklabs-gcp-02-c768c2327a6d

BigQuery

Explorer

Search BigQuery resources

Viewing resources.

SHOW STARRED ONLY

qwklabs-gcp-02-c768c2327a6d

bqmlforecast

Models (1)

bike_model

training_data

bigquery-public-data

SUMMARY

Nothing currently selected

Untitled query

RUN

SAVE

1 SELECT

2 *

3 FROM

4 ML.EVALUATE(MODEL bqmlforecast.bike_model)

Query results

SAVE RESULTS

JOB INFORMATION

RESULTS

CHART

JS

Row

start_station_id

non_seasonal_p

non_seasonal_d

1

293

0

1

2

435

0

1

3

497

0

1

Results per page: 50

1 - 5 of 5

Job history

REFRESH

Google Cloud Skills Boost

Course > Applying BigQuery...

Where can you find helpful information and tutorials on BigQuery ML?

cloud.google.com/bigquery-ml

Reddit

Twitter

TikTok

Submit

60/100

Click Check my progress to verify the objective.

Evaluate the time series model

Check my progress

Assessment Completed!

Previous

Next

Google Cloud

qwklabs-gcp-02-c768c2327a6d

Search (/) for resources, docs, products, and more

BigQuery

Explorer

Search BigQuery resources

Viewing resources.

SHOW STARRED ONLY

qwklabs-gcp-02-c768c2327a6d

bqmlforecast

Models (1)

bike_model

training_data

bigquery-public-data

SUMMARY

Nothing currently selected

Untitled query

RUN

DOWNLOAD

SHARE

SCHEDULE

MORE

SAVE

Query completed.

1 DECLARE HORIZON STRING DEFAULT "30"; #number of values to forecast

2 DECLARE CONFIDENCE_LEVEL STRING DEFAULT "0.90";

3

4 EXECUTE IMMEDIATE format(''

5 SELECT

6 *

7 FROM

8 ML.FORECAST(MODEL bqmlforecast.bike_model,

9 STRUCT(%s AS horizon,

10 %s AS confidence_level)

11)

12 '','',' HORIZON, CONFIDENCE_LEVEL)

All results

Elapsed time

1 sec

Statements processed

2

Job status

SUCCESS

Status

End time

SQL

Stages completed

Bytes processed

Action

11:35 AM [4.20]

SELECT STRUCT<STRING>(format(''

1

0 B

VIEW RESULTS

11:35 AM Procedure

SELECT

3

181 KB

VIEW RESULTS

Job history

REFRESH

You are signed in as 2348521

Lab - 8

Building Demand Forecasting

cloudskillsboost.google/course_templates/673/labs/459529

Google Cloud

DashboardPathsExploreProfileSubscriptions

50 pts

?

Google Cloud Skills Boost

You earned 10 points for completing a lab step!

Applying BigQuery ML's Classification, Regression, and Demand Forecasting for Retail Applications > Applying BQML's Classification, Regression, and Demand Forecasting for Retail Applications

End Lab

00:43:32

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Open Google Cloud Console

Username

student-00-ae18a0546691

Password

w3SjDfZ174dS

Project ID

qw1k1abs-gcp-02-c768c2f

Submit

In addition to the above, BigQuery ML also supports scheduled queries. To learn more about scheduled queries, watch [Scheduling and automating model retaining with scheduled queries](#).

Click **Check my progress** to verify the objective.

✓

Make Predictions using the model

Check my progress

Assessment Completed!

Lab instructions and tasks

100/100

GSP852

Overview

Set up your environment

Task 1. Explore the NYC Citi Bike Trips dataset

Task 2. Cleaned training data

Task 3. Training a model

Task 4. Evaluate the time series model

Task 5. Make predictions using the model

Task 6. Other datasets to explore

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Lab - 8

Building Demand Forecasting

cloudskillsboost.google/course_templates/673/labs/459529

Google Cloud

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50 pts

?

Google Cloud Skills Boost

Applying BigQuery ML's Classification, Regression, and Demand Forecasting for Retail Applications > Applying BQML's Classification, Regression, and Demand Forecasting for Retail Applications

End Lab

00:43:24

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Open Google Cloud Console

Username

student-00-ae18a0546691

Password

w3SjDfZ174dS

Project ID

qw1k1abs-gcp-02-c768c2f

Congratulations!

You've successfully built a ML model in BigQuery to perform demand forecasting.

Next steps /learn more

To learn more about this subject from developer advocate [Polong Lin](#) see:

- YouTube - [How to build and deploy a demand forecasting solution with BigQuery ML](#) (12 minutes)
- Google Cloud blog - [How to build demand forecasting models with BigQuery ML](#)

Here is another example of how to use demand forecasting:

- Towards Data Science blog - [How to do time series forecasting in BigQuery](#)

Learn more about the tools used in this lab:

Lab instructions and tasks

100/100

GSP852

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