BigQuery ML locations

This page explains the concept of *data location* and the different locations where you can create BigQuery datasets and BigQuery ML models.

For information about regional pricing for BigQuery ML, see the Pricing (/bigquery-ml/pricing) page.

Key concepts

Locations or region types

There are two types of locations:

- A *region* is a specific geographic place, such as London.

- A *multi-region* is a large geographic area, such as the United States, that contains two or more geographic places.

Dataset location

You specify a location for storing your BigQuery data when you create a dataset to store your BigQuery ML models and training data. After you create the dataset, the location cannot be changed, but you can copy the dataset to a different location (/bigquery/docs/copying-datasets), or manually move (recreate) the dataset in a different location (/bigquery/docs/managing-datasets#moving_datasets).

BigQuery ML processes and stages data in the same location as the target dataset.

BigQuery ML stores your data in the selected location in accordance with the Service Specific Terms (/terms/service-terms#13-google-bigquery-service).

Supported regions

Like BigQuery, BigQuery ML is a regional (/docs/geography-and-regions#regional_resources) and a multi-regional resource (/docs/geography-and-regions#multi-regional_resources).

BigQuery ML model prediction and other ML functions are supported in the same regions as BigQuery.

Not all kinds of model training are supported in all regions.

Training models

- Training for built-in models (linear regression, logistic regression, kmeans, matrix factorization, and time series) is supported in all the same regions as model prediction and other ML functions.

- Imported models are supported in all the same regions as model prediction and other ML functions.

- Training for DNN and Boosted Trees using XGBoost models is available in the multi-regions US and EU, and the following regions:

    - `Los Angeles (us-west2)`

    - `Northern Virginia (us-east4)`

    - `Finland (europe-north1)`

    - `London (europe-west2)`

    - `Tokyo (asia-northeast1)`

- Training for AutoML tables is supported in the multi-regions US and EU.

The following models are in a pre-release state and might change or have limited support: matrix factorization DNN, Boosted Trees, and AutoML tables. For more information, see the product launch stages lucts#product-launch-stages).

Model prediction and other ML functions

BigQuery ML supports the following locations.

Regional locations

Region description	Region name	Imported models	Built-in model training	DNN/Boosted Tree model training	AutoML model training
Americas					
Las Vegas	`us-west4`	●	●		
Los Angeles	`us-west2`	●	●	●	
Montréal	`northamerica-northeast1`	●	●		
Northern Virginia	`us-east4`	●	●	●	
Oregon	`us-west1`	●	●		
Salt Lake City	`us-west3`	●	●		
São Paulo	`southamerica-east1`	●	●		
South Carolina	`us-east1`	●	●		
Europe					
Belgium	`europe-west1`	●	●		
Finland	`europe-north1`	●	●	●	
Frankfurt	`europe-west3`	●	●		
London	`europe-west2`	●	●	●	
Netherlands	`europe-west4`	●	●		
Zürich	`europe-west6`	●	●		
Asia Pacific					
Hong Kong	`asia-east2`	●	●		
Jakarta	`asia-southeast2`	●	●		
Mumbai	`asia-south1`	●	●		
Osaka	`asia-northeast2`	●	●		
Seoul	`asia-northeast3`	●	●		
Singapore	`asia-southeast1`	●	●		

Region description	Region name	Imported models	Built-in model training	DNN/Boosted Tree model training	AutoML model training
Sydney	`australia-southeast1`	●	●		
Taiwan	`asia-east1`	●	●		
Tokyo	`asia-northeast1`	●	●	●	

Multi-regional locations

Region description	Region name	Imported models	Built-in model training	DNN/Boosted Tree model training	AutoML model training
Data centers within member states (https://europa.eu/european-union/about-eu/countries_en) of the European Union[1]	EU	●	●	●	●
Data centers in the United States	US	●	●	●	●

[1] Data located in the `EU` multi-region is not stored in the `europe-west2` (London) or `europe-west6` (Zürich) data centers.

What's next

- Read an overview of BigQuery ML (/bigquery-ml/docs/bigqueryml-intro)

- To get started using BigQuery ML, see Getting started with BigQuery ML using the web UI (/bigquery-ml/docs/bigqueryml-web-ui-start).

- View all the Google Cloud services available in locations worldwide (/about/locations#region).

- Explore additional location-based concepts (/docs/geography-and-regions), such as zones, that apply to other Google Cloud services.