

Cloud AI

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Pre-built Artificial Intelligence



TIP: Machine Learning is more of a focus of the Data Engineering track rather than the Cloud Architect track, but it is still part of the infrastructure a Cloud Architect might use to define solutions. So you should be familiar with the services and what they do.

Pre-built models are offered as services. In many cases these building blocks can be used to create the application you want without the expense or complexity of creating your own models.

Cloud Speech-to-Text converts audio to text for data processing. Cloud Natural Language API recognizes parts of speech called entities and sentiment. Cloud Translation converts text in one language to another. Dialogflow Enterprise Edition is used to build chatbots to conduct conversations. Cloud Text-to-Speech converts text into high quality voice audio. Cloud Vision API is for working with and recognizing content in still images. And Cloud Video Intelligence API is for recognizing motion and action in video.

Cloud AutoML builds custom AI models



Cloud AutoML
Natural Language



Cloud AutoML
Translation



Cloud AutoML
Vision

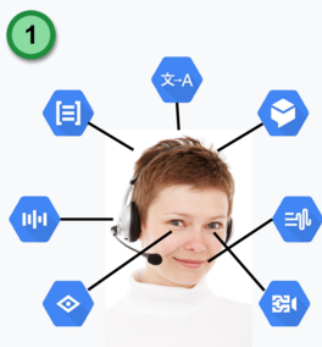


Cloud AutoML Natural Language classifies English content into custom categories.

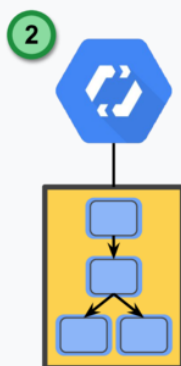
Cloud AutoML Translation enables models that translate into words and phrases specific to your domain.

Cloud AutoML Vision classifies images according to your defined labels.

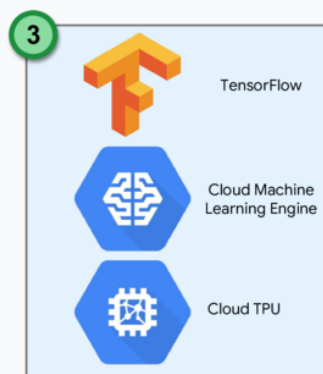
Artificial Intelligence architectural strategy



Use pre-built AI



Add Custom Models

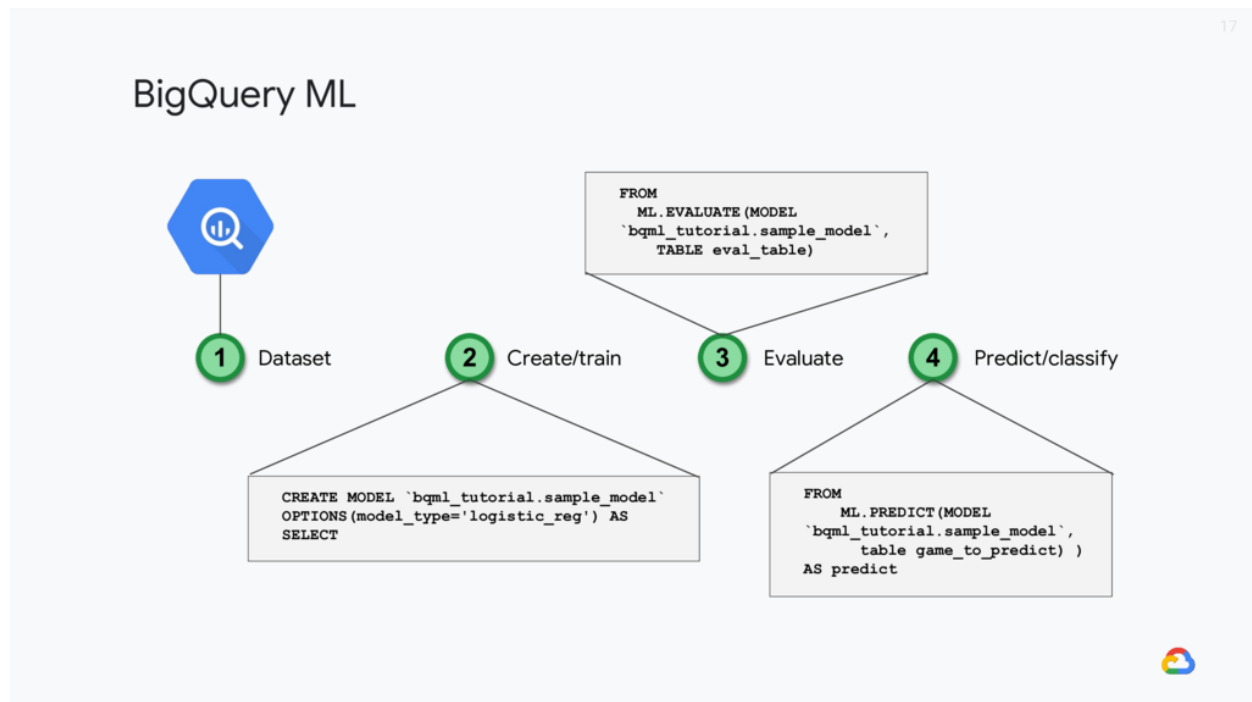


Create new Models



The recommended strategy is to first, use the pre-built artificial intelligence services. Next, you can use Cloud AutoML to produce Custom Models which can be used with the pre-built services or on their own. Remember that you can divide a problem into specialized parts and use multiple Custom Models together. Finally, if you discover you need more advanced features, you can use the Machine Learning and Artificial Intelligence services to create new models.

<https://pixabay.com/photos/agent-business-call-center-18762/>



There are two key benefits of BigQuery ML. First, it works on your data that is already in BigQuery storage -- in your Data Warehouse or Data Lake.

So the data does not need to be copied out of BigQuery or reformatted. This improves efficiency in many ways, and in some cases resolves privacy concerns.

Second, BigQuery ML uses SQL commands. That means BigQuery users can learn to create their own models by extending their use of a language they already know.

Works with full models (not Custom Models like Cloud AutoML).

The locality of your model is the same as your dataset. So that is defined when the dataset is created.