of business intelligence and analytics personnel to more easily harness the predictive power of using machine learning for business forecasting and decision-making.

What BigQuery Is Not

As powerful and widely purposed as BigQuery is, it may not be properly suited for some use cases:

- BigQuery is not a replacement for a relational database. Some business use cases may involve a large number of table row updates; in such an instance, BigQuery is most likely not the data storage solution of choice, as relational databases are well suited for such highly transactional tasks. GCP offers the Cloud SQL and Cloud Spanner as parts of its managed relational products.
- BigQuery is not a NoSQL database. Data stored in BigQuery must have a schema. NoSQL is a schema-less data storage solution. GCP also has Cloud BigTable and Cloud Datastore, which are highly scalable and performant managed NoSQL products.

Getting Started with BigQuery

BigQuery can be accessed and used via a variety of ways; they include

- The BigQuery web UI
- The command-line tool, **'bq'**
- The client API libraries for programmatic access

In this section, we will introduce BigQuery by working with the web UI, because it gives a graphical view of the datasets and tables within BigQuery and is good for quick execution of queries on the query engine.

To open BigQuery from the GCP dashboard, click the triple dash on the top-left corner and select **BigQuery** from the product section labeled **Big Data** as shown in Figure 38-1.

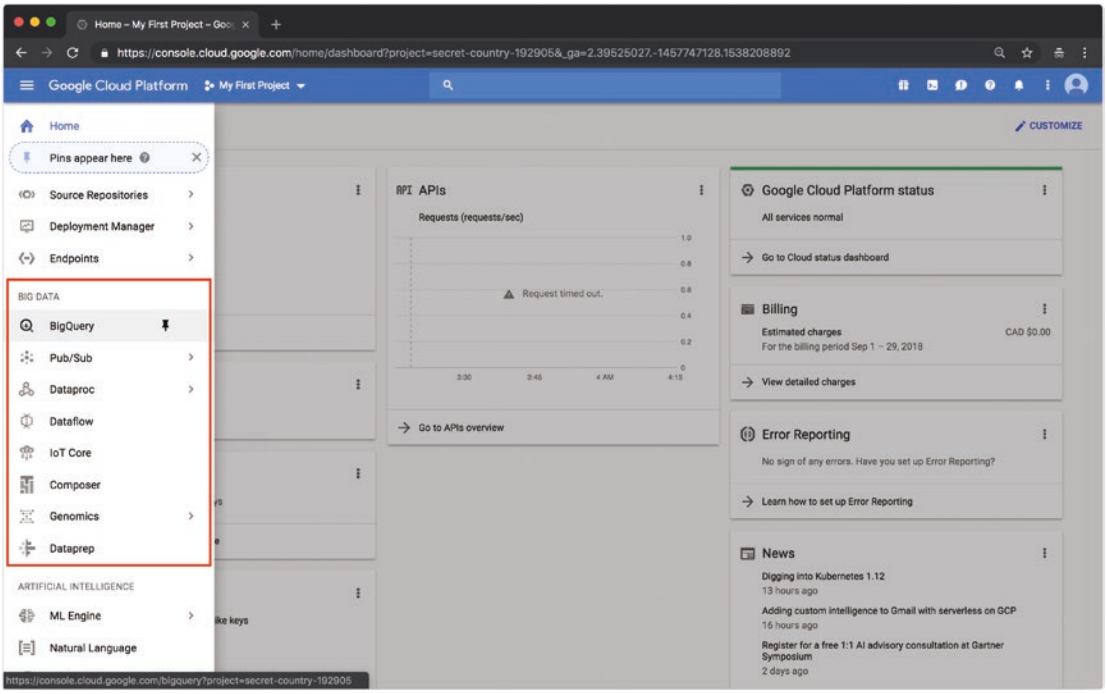

Figure 38-1. *Open BigQuery*

The BigQuery web UI dashboard is as shown in Figure 38-2.

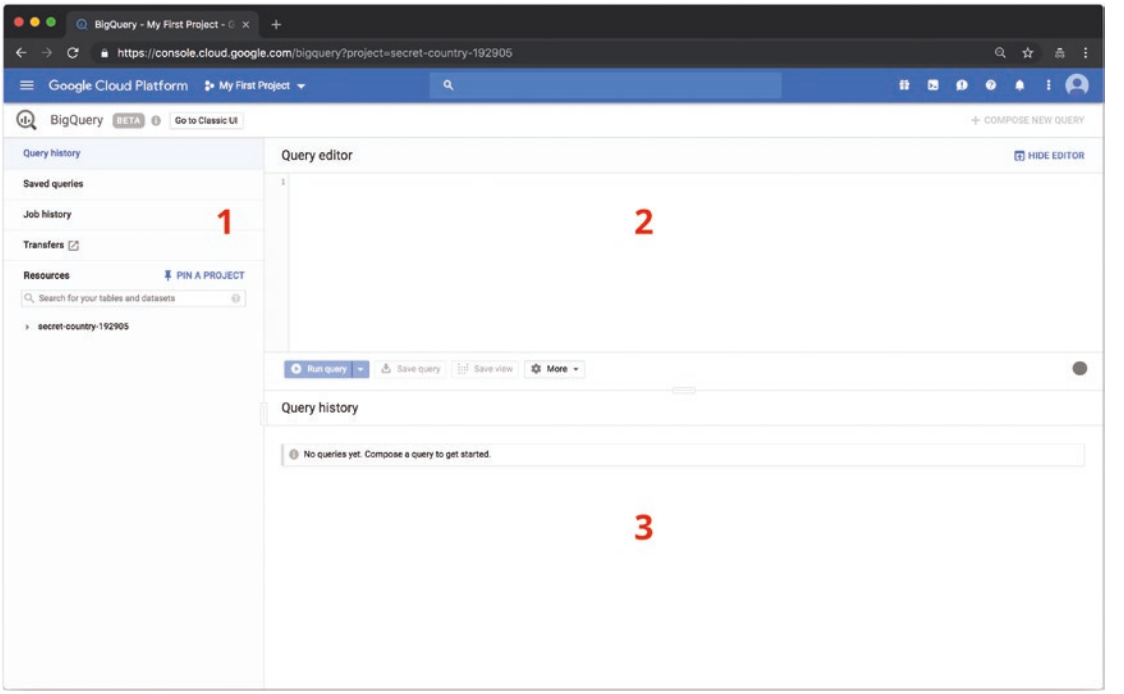

Figure 38-2. *BigQuery web UI*

In Figure 38-2, there are three labeled sections of the BigQuery web UI that we'll briefly explain:

1. The navigation panel: This panel contains a set of BigQuery resources such as
   - Query history: For viewing previous queries
   - Saved queries: For storing frequently used queries
   - Job history: For viewing BigQuery jobs such as loading, copying, and exporting of data
   - Transfers: Link to the BigQuery Data Transfer Service UI
   - Resources: Shows a list of pinned projects and their containing Datasets

2. The Query editor: This is where queries are composed using the familiar SQL database language.

3. The Details panel: This panel shows the details of projects, datasets, and table when clicked in the **Resources** tab. Also, this panel shows the results of executed queries.

Public Datasets

BigQuery comes with access to some public datasets; we will use these datasets to explore working with BigQuery. To view the public datasets, go to

https://console.cloud.google.com/bigquery?p=bigquery-public-data&page=project.

The public datasets will now show in the Resources section of the navigation panel (see Figure 38-3).

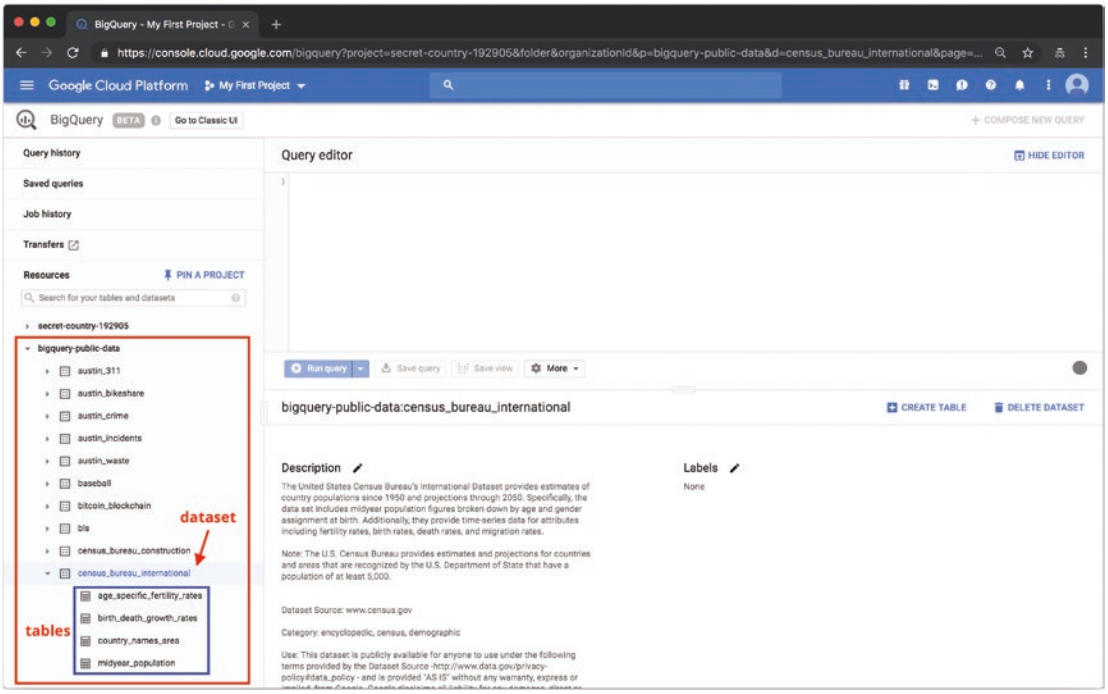

Figure 38-3. *Public Datasets*