

Get started with data calculations

Pivot...pivot...pivot...

Learn more SQL calculations

The data-validation process

Using SQL with temporary tables

▶

Video: Temporary tables

6 min

📝

Practice Quiz: Hands-On Activity: Create temporary tables

2 questions

▶

Video: Multiple table variations

3 min

📖

Reading: Working with temporary tables

10 min

📖

Reading: Your intermediate guide to SQL

10 min

📖

Reading: Using Connected Sheets with BigQuery

10 min

📝

Practice Quiz: Test your knowledge on using SQL with temporary tables

3 questions

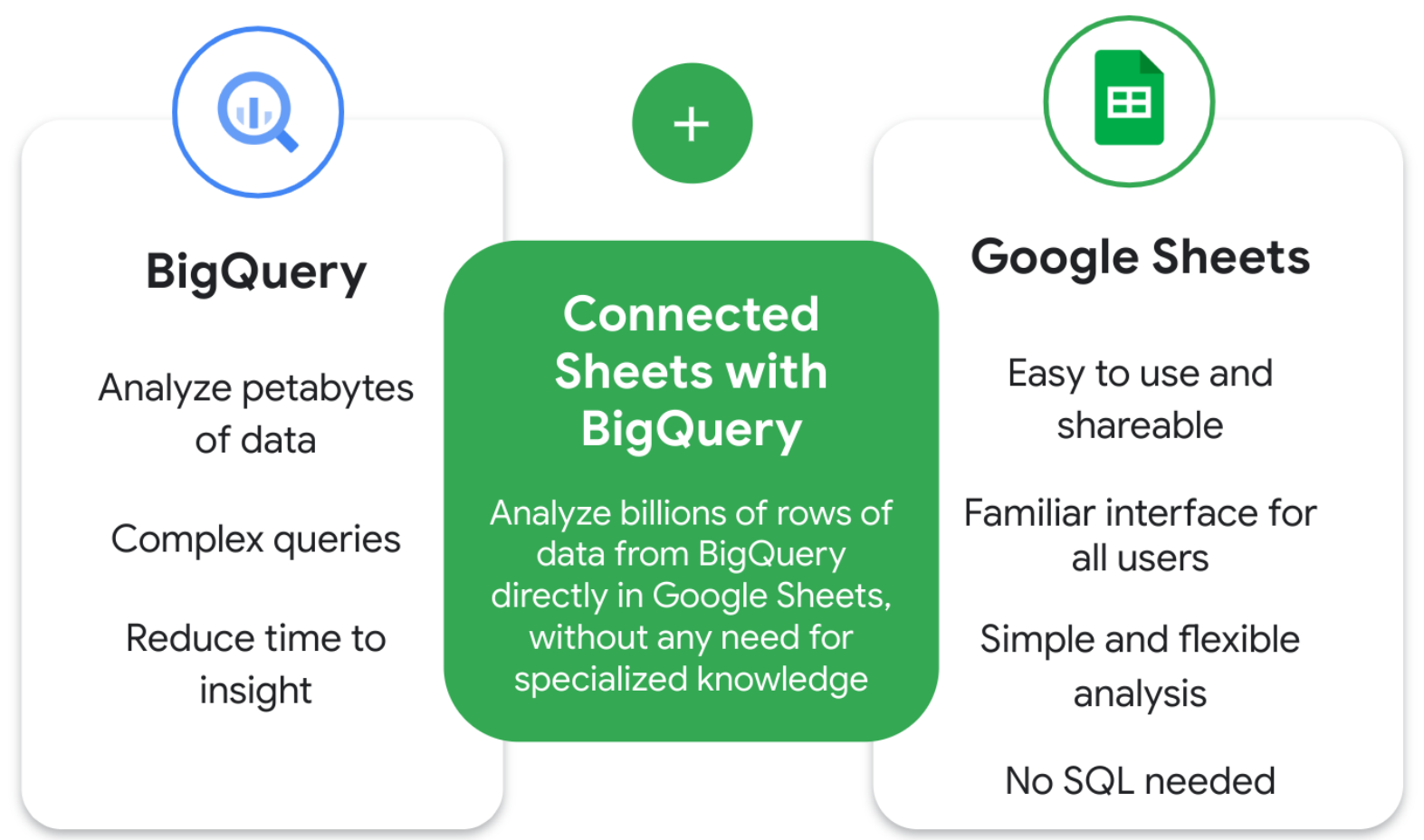
Weekly challenge 4

Course challenge

Using Connected Sheets with BigQuery

In this reading, you will learn about Connected Sheets, a tool that allows data professionals to use basic spreadsheet functions to analyze large datasets housed in BigQuery. With Connected Sheets users don't need to know SQL. Instead, anyone, not just data professionals, can generate insights with basic spreadsheet operations such as formulas, charts, and pivot tables.

What is Connected Sheets?



Recall that BigQuery allows users to analyze petabytes (a million gigabytes) of data using complex queries. A benefit of BigQuery is that it reduces the time needed to develop insights from large datasets.

Google Sheets, on the other hand, is a spreadsheet tool that is easy to use and shareable with a familiar interface. It also allows simple and flexible analysis with tools like pivot tables, charts, and formulas.

Connected Sheets integrates both BigQuery and Google Sheets, allowing the user to analyze billions of rows of data in Sheets without any need for specialized knowledge, such as SQL.

Additionally, Connected Sheets is built to handle big data. Users won't experience the same limitations or performance issues they've had in the past (such as data loss) when working with large data sets in spreadsheets.

Why would a data analytics professional use Connected Sheets?

As a data analytics professional, Connected Sheets can help with several tasks, such as:

- Collaborating with partners, analysts, or other stakeholders in a familiar spreadsheet interface;
- Ensuring a single source of truth for data analysis without additional .csv exports;
- Defining variables so that all users are working with the same data;
- Sharing insights with your team in a secure environment; and
- Streamlining your reporting and dashboard workflows.

Many teams and industries benefit from Connected Sheets such as finance, marketing, and operations teams.

A few example use cases of Connected Sheets include:

- **Business planning:** A user can build and prepare datasets, and then find insights from the data. For example, a data analyst can analyze sales data to determine which products sell better in different locations.
- **Customer service:** A user can find out which stores have the most complaints per 10,000 customers.
- **Sales:** A user can create internal finance and sales reports. After completing, they can share revenue reports with sales reps.
- **Logistics, fulfillment, and delivery:** A user can run real-time inventory management and intelligent analytics tools.

Connected Sheets benefits

Collaborate with teammates and stakeholders

Since Connects Sheets lives in Google Workspace, you can easily collaborate with other teammates and stakeholders in your company. If you'd like to limit access, you also control permissions for who can view, edit, or share the data.

Do more with familiar tools

With Connected Sheets, you can access billions of rows of BigQuery data directly in Sheets. This direct access makes it easier for all employees to track, forecast, and analyze their data to get to better decisions faster.

Easily visualize data

You can unlock insights from your BigQuery datasets using features you're already familiar with in Sheets, such as pivot tables, charts, and formulas. These features help visualize large datasets more easily than using a more advanced language such as SQL. However, if you know SQL, you may prefer to use it in certain situations.

Up to date data

With Connected Sheets, data professionals can ensure they are making decisions based on a single source of truth by setting up automatic refreshes of BigQuery data in Sheets.

Less data integrity and security risk

While users can access big data with Connected Sheets, they won't be able to accidentally manipulate or jeopardize the integrity of the data. There's less security risk because data isn't stored on individual workstations, it's stored in the cloud.

Connected Sheets shortcomings

Limited free pricing tier

A shortcoming of Connected Sheets is that for the free pricing tier, users only receive 1 terabyte (TB) of processed query data each month. To process more data, you will need to move to a paid tier.

Data must be housed in BigQuery

Another shortcoming is that you will need access to your data set in BigQuery. Without access to BigQuery, you won't be able to analyze data in Connected Sheets.

Query will fail with large results

A third shortcoming is that the Connected Sheets query will fail if the results are too large. Your query will fail if your pivot table has a significant amount of results, which could be anywhere from 30,000 to 50,000. To reduce your results, you can use filters or limit the number of rows per breakout.

Key takeaways

Connected Sheets provides a tremendous opportunity to analyze large data sets without specialized skills like SQL. Use familiar spreadsheet skills such as pivot tables, charts, and formulas to analyze the data. For junior data analysts in particular, Connected Sheets can help them perform key tasks within BigQuery and increase their marketable skills.

Resources for more information

- [Get started with BigQuery data in Google Sheets](#)
- [Insights at scale with Google Sheets](#)
- [Connected Sheets product announcement](#)

Mark as completed

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