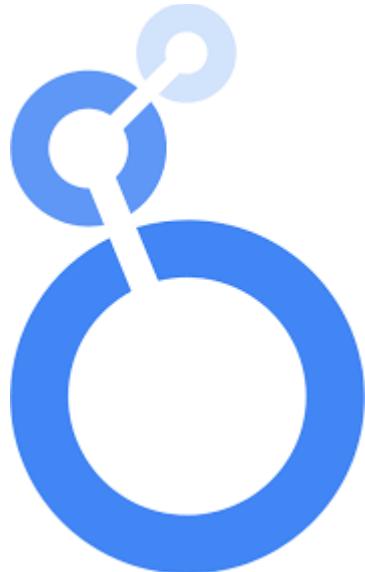


How to Create a Report in

Google Cloud

Looker Studio



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Introduction

In this document, I explain "[How to Create a Report in Google Cloud Looker Studio](#)".

In my reports, I use the base tables in "[Kaye is Learning SQL](#)".

"[Kaye is Learning SQL](#)" is in the github website below.

<https://deuhub.github.io/KayeilSQL-00-Introduction/>

Where are the Base Tables

The [Base Table Data in CSV format](#), and documentation on "[How to Create Tables in Google Cloud BigQuery from CSV files](#)" are in the GitHub Repository below.

https://github.com/deuhub/kayeilsql_bigquery_csv

In the same repository, there is a documentation on "[How to Open a free 3-months Google Cloud Platform \(GCP\) Account](#)".

Thank You Google

I would like to thank [Google](#), for letting me and [countless number of Developers](#) all around the world, use the [Google Cloud Platform \(GCP\)](#) and the [Looker Studio](#) for free.

Thanks very much Google, for letting us enhance our SQL, Development, and Reporting skills.



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Document Date 09 October 2024

Now, let's get going.

Report One – Countries by Join Year

This report will display the European Union countries by their Join Date To the EU.

The SQL Query

Initially, I prepare the SQL query I am going to use in my report.
I will use the following query.

```
select count(country_id) no_of_countries,  
extract(year from join_date) join_year  
from `kayeilsq1.countries`  
where status='M'  
group by join_year  
order by join_year;
```

This query answers the following questions.

- Q1.** On which years the countries joined the EU?
Q2. How many countries joined the EU on those years?

Run the query in Google Cloud BigQuery

I will run the query in Google Cloud BigQuery.

I go to the console.

<https://console.cloud.google.com/>



Here I am in **Google Cloud BigQuery**.

I can see my project in the Explorer.

A screenshot of the Google Cloud BigQuery Studio interface. The top navigation bar shows 'Google Cloud', 'My First Project', and a search bar. The left sidebar is titled 'Explorer' with a green border around it, showing a list of resources including 'meta-altar-436208-u2' with a green arrow pointing to it. The main area says 'Welcome to BigQuery Studio.' and has tabs for 'SQL QUERY', 'PYTHON NOTEBOOK', and 'DATA CANVAS'.

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

Explorer + ADD

Viewing resources.

SHOW STARRED ONLY

meta-altar-436208-u2

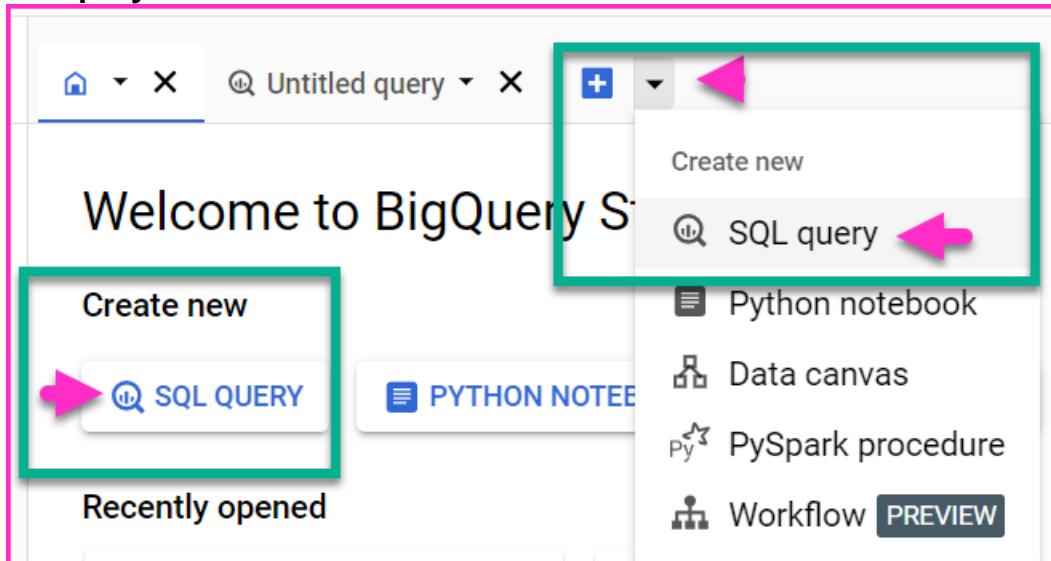
Welcome to BigQuery Studio.

Create new

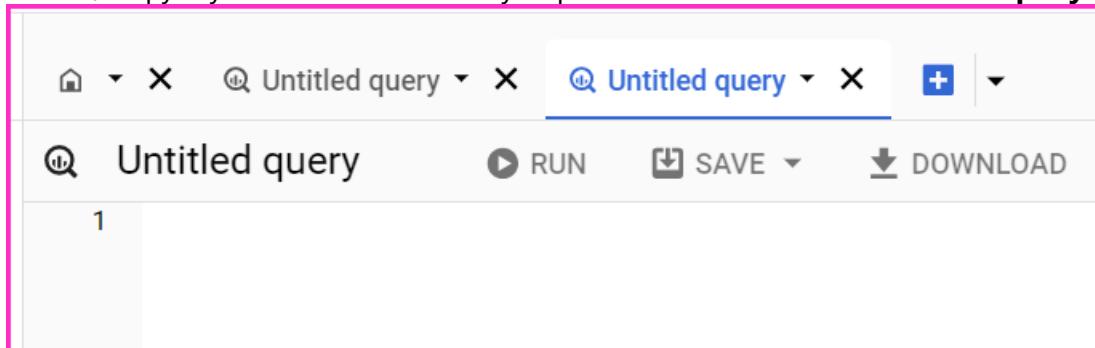
SQL QUERY PYTHON NOTEBOOK DATA CANVAS

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I either click on the **SQL QUERY button** on the left, or click on the **+ down arrow** and select **SQL query**.



I write / copy my SQL Statement for my Report in the window titled **Untitled query**.



The screenshot shows the BigQuery Studio interface with the '*Untitled query' window active. The window title bar says '*Untitled query'. Below the title bar are 'RUN', 'SAVE', and 'DOWNLOAD' buttons. The main area of the window contains the following SQL code:

```
1 select count(country_id) no_of_countries,
2 extract(year from join_date) join_year
3 from `kayeilsq1.countries`
4 where status='M'
5 group by join_year
6 order by join_year;
```

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I run the query.

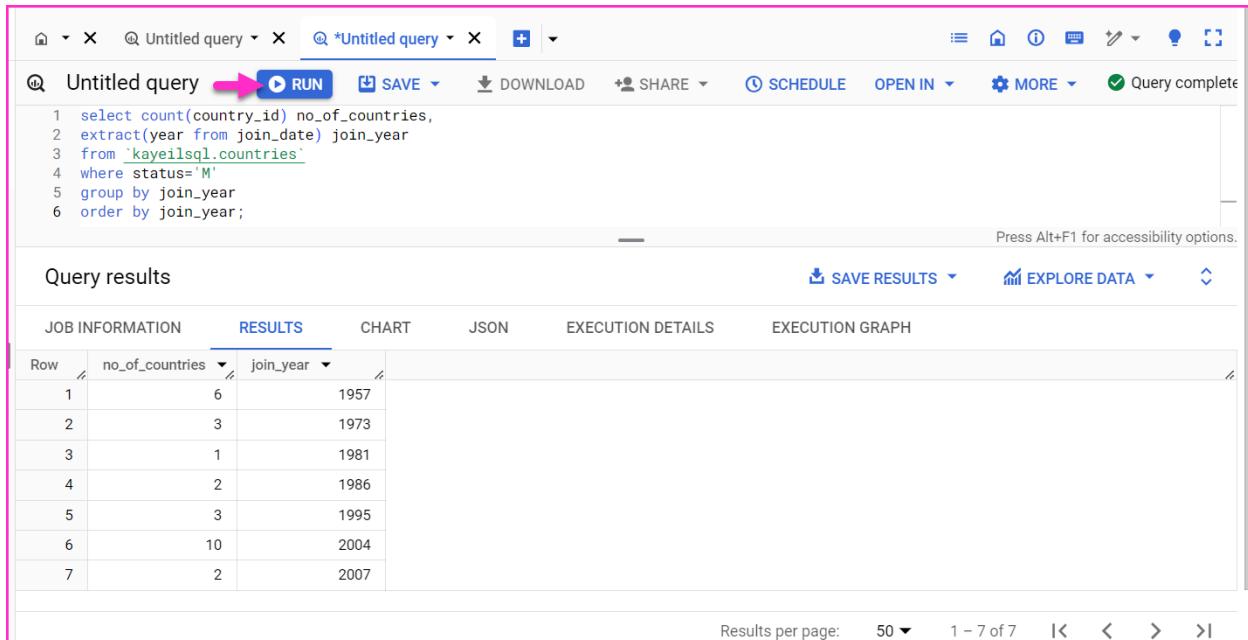
I can see that my query ran successfully.

The results are ordered by Join Year to the EU.

For each year, I can see the number of countries joined the EU that year.

My results have a total of 7 rows, 7 distinct years of joining the EU.

If I sum up the number of countries, it gives me 27, which is the total number of the Member countries.



A screenshot of the Google Looker Studio interface. At the top, there are tabs for 'Untitled query' and '*Untitled query'. Below the tabs is a toolbar with icons for RUN (highlighted with a pink arrow), SAVE, DOWNLOAD, SHARE, SCHEDULE, OPEN IN, MORE, and a checkmark indicating 'Query complete'. The main area shows the SQL query code:

```
1 select count(country_id) no_of_countries,
2 extract(year from join_date) join_year
3 from `kayeilsql.countries`
4 where status='M'
5 group by join_year
6 order by join_year;
```

Below the code is a message: 'Press Alt+F1 for accessibility options.' Underneath is a section titled 'Query results' with tabs for 'RESULTS' (which is selected), CHART, JSON, EXECUTION DETAILS, and EXECUTION GRAPH. The results table has columns 'Row', 'no_of_countries', and 'join_year'. The data is as follows:

Row	no_of_countries	join_year
1	6	1957
2	3	1973
3	1	1981
4	2	1986
5	3	1995
6	10	2004
7	2	2007

At the bottom, there are buttons for 'SAVE RESULTS' and 'EXPLORE DATA', and a footer with 'Results per page: 50 ▾ 1 – 7 of 7' and navigation arrows.



Save the Query

I will now save this query, under my project in BigQuery.

I click on the **Save button**, I select **Save query (classic)**.

The screenshot shows the Google Looker Studio interface. At the top, there are two tabs: 'Untitled query' and '*Untitled query'. Below the tabs, the title 'Untitled query' is displayed. To the right of the title are three buttons: 'RUN', 'SAVE', and 'DOWNLOAD'. A dropdown menu is open next to the 'SAVE' button. The menu options are: 'Save query', 'Save query (classic)', 'No version history or sharing', 'Save view', and 'Save as...'. A pink arrow points from the text 'I select Save query (classic)' to the 'Save query (classic)' option in the dropdown menu. The main area of the interface shows a query editor with the following SQL code:

```
1 select count(country_id) no_of_
2 extract(year from join_date) jo
3 from `kayeilsq1.countries`
4 where status='M'
5 group by join_year
6 order by join_year;
```

Below the query editor, the results are displayed in a table. The table has two columns: 'no_of_countries' and 'join_year'. The data is as follows:

Row	no_of_countries	join_year
1	6	1957
2	3	1973
3	1	1981
4	2	1986
5	3	1995
6	10	2004
7	2	2007

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A window opens up.

I enter a name, and click on Save.

Save query

Info Saved queries store query text and dialect settings only. Once a query has been saved, all other settings are reset to defaults.

Name *

Visibility

Save query

Info Saved queries store query text and dialect settings only. Once a query has been saved, all other settings are reset to defaults.

Name *

Visibility

Here is my query, saved under my project, under Classic Queries.

The screenshot shows the Google Cloud Explorer interface. At the top, it says "Google Cloud" and "My First Project". Below that is a search bar with "Search BigQuery resources". A sidebar on the left lists various resource types with icons. The main area shows a tree view of resources under "meta-altar-436208-u2". Under "Queries", there is a folder for "(Classic) Queries (5)". Inside this folder, several files are listed: "information_schema.sql", "kayeysql_week_02.sql", "kayeysql_week_03.sql", "kayeysql_week_04.sql", and "lookerStudio_Report_One.sql". The file "lookerStudio_Report_One.sql" is highlighted with a pink arrow and is currently selected, as indicated by the blue background. Other items in the list have small arrows pointing to them from the right side of the image.

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My Query now has a name.

The screenshot shows the Google Cloud Explorer interface. On the left, there's a sidebar with various icons and a search bar for BigQuery resources. The main area shows a list of resources under 'meta-altair-436208-u2'. A specific query named 'lookerStudio_Report_One.sql' is selected and highlighted with a blue background. The query code is displayed in the center:

```
1 select count(country_id) no_of_countries,
2 extract(year from join_date) join_year
3 from `kayeysql.countries`
4 where status='M'
5 group by join_year
6 order by join_year;
```

To the right of the code, there's a 'Query results' section with a table showing the data. The table has two columns: 'no_of_countries' and 'join_year'. The data is as follows:

Row	no_of_countries	join_year
1	6	1957
2	3	1973
3	1	1981
4	2	1986
5	3	1995
6	10	2004
7	2	2007

BigQuery to Looker Studio

I use the query results in Looker Studio as follows.

One. In the **Query Results** section of the query, I click on **EXPLORE DATA**.

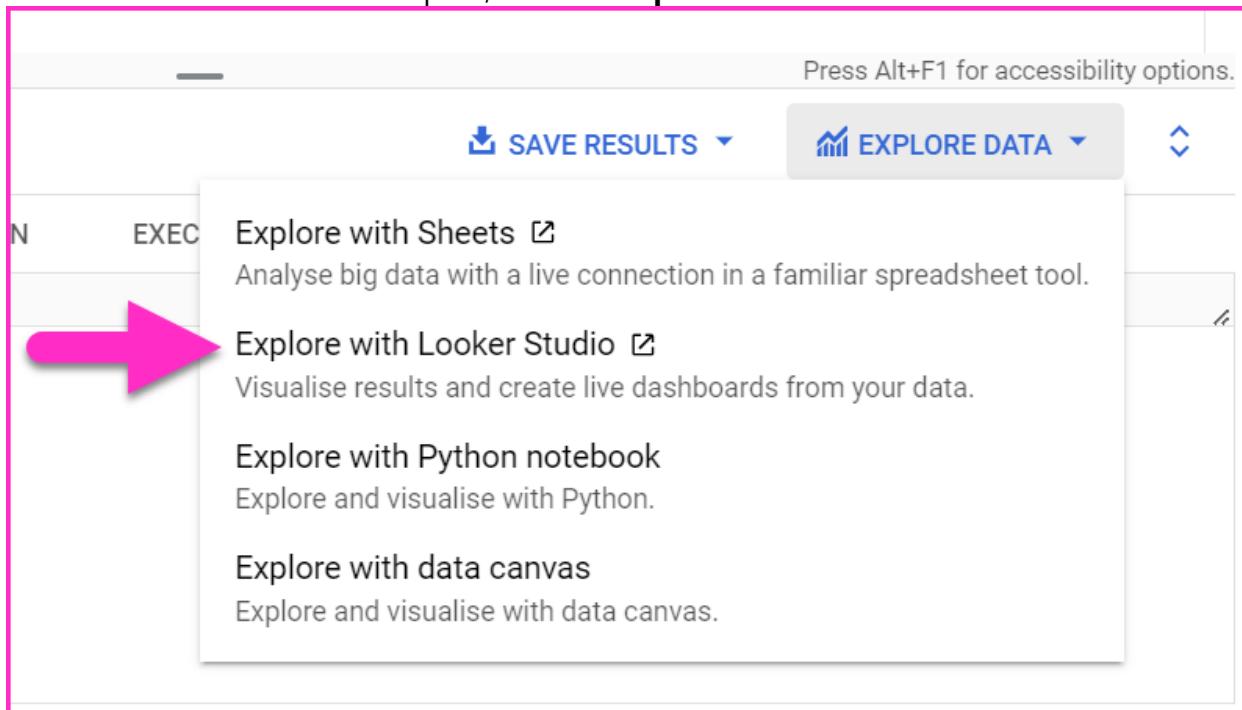
The screenshot shows the Looker Studio interface. At the top, there's a navigation bar with various buttons like RUN, MORE, SAVE QUERY (CLASSIC), SHARE, SCHEDULE, OPEN IN, and a DEU icon. Below the navigation bar, the query code is shown again:

```
1 select count(country_id) no_of_countries,
2 extract(year from join_date) join_year
3 from `kayeysql.countries`
4 where status='M'
5 group by join_year
6 order by join_year;
```

The main area is titled 'Query results'. It contains a table with the same data as the previous screenshot. To the right of the table, there's a button labeled 'EXPLORE DATA' with a pink arrow pointing to it. A green box highlights the 'Query results' section and the 'EXPLORE DATA' button.

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Two. In the small window that opens, I click on **Explore with Looker Studio**.



Google Cloud BigQuery takes me to a new screen: The Looker Studio Reporting Screen.

The Looker Studio Reporting Screen

This is the Looker Studio Reporting screen.

Looker has already created a report using my query results.

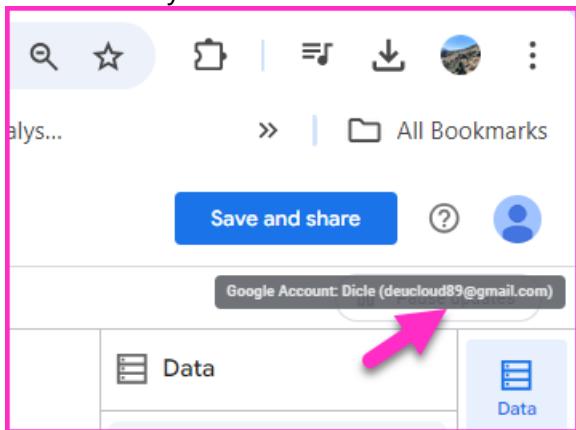
The screenshot shows the Looker Studio reporting interface. On the left, there is a data table with columns 'join_year' and 'no_of_countries'. The data is as follows:

join_year	no_of_countries
2004	10
1957	6
1995	3
1973	3
1986	2
2007	2
1981	1

In the center, there is a bar chart titled 'BigQuery Custom SQL' with 'no_of_countries' on the y-axis and 'join_year' on the x-axis. The bars show the count of countries for each year. On the right, there is a sidebar with a 'Data' panel containing fields like 'BigQuery Custom SQL - 04/10/2024, 0...', 'join_year', 'no_of_countries', and 'Record Count'. There are also buttons for 'Add a field', 'Add a parameter', and 'Add Data'.

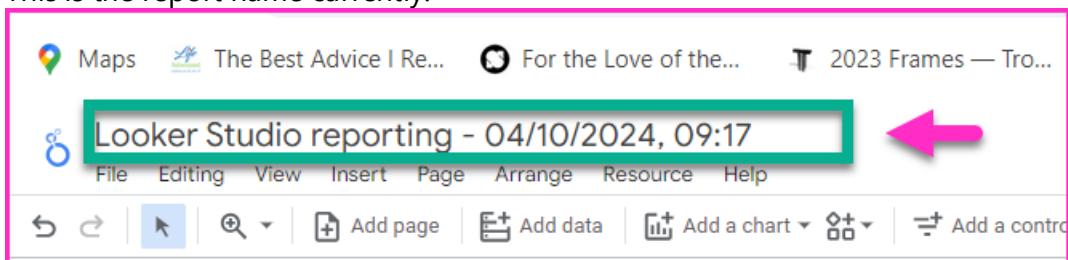
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And I have the same user as in BigQuery.
This is exactly what I want.

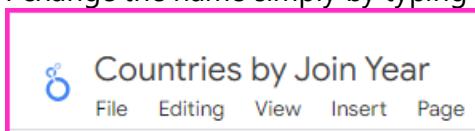


Rename the Report

I will initially rename my report.
This is the report name currently.

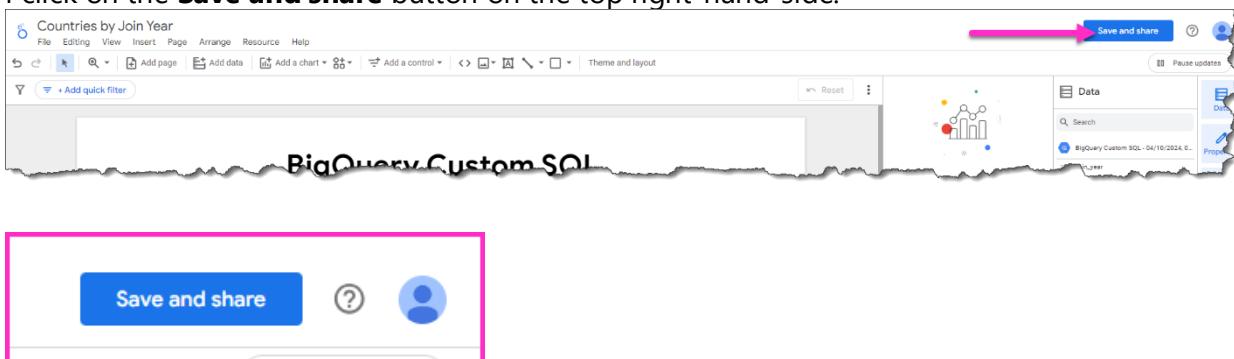


I change the name simply by typing over it.



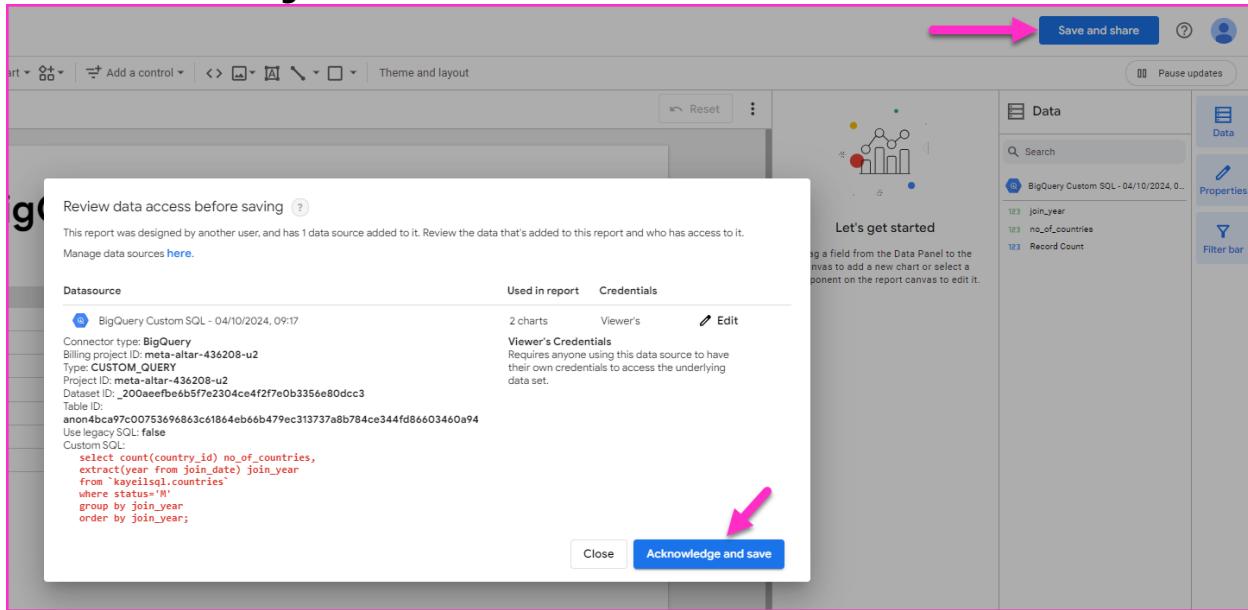
Save the Report

I will now SAVE my Looker Studio Report.
I click on the **Save and share** button on the top right-hand-side.

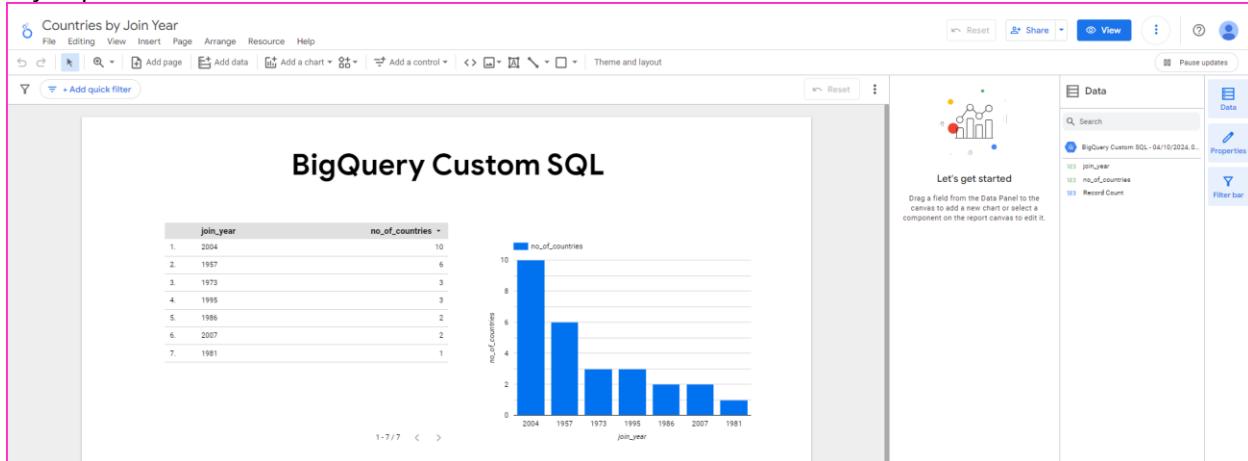


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When I click on **Save and share** button, a window opens.
I click on **Acknowledge and share**.



My report is now saved.



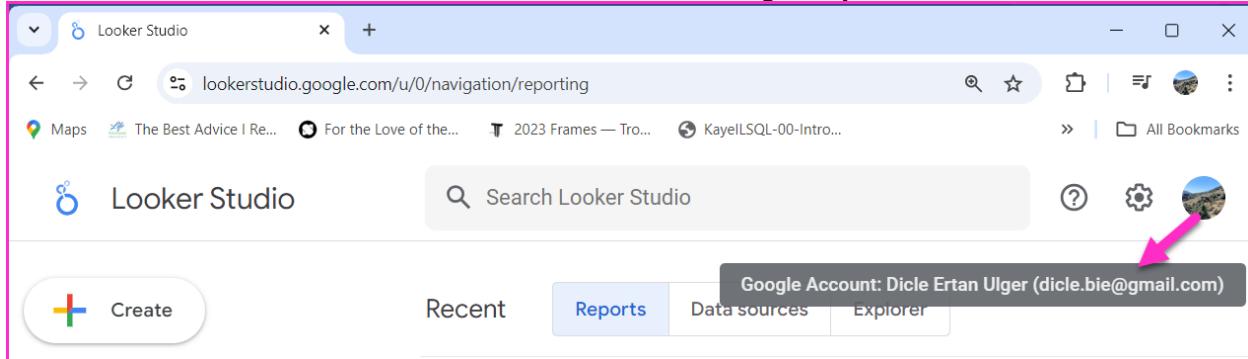
Where is my Report?

My report is in the following address.

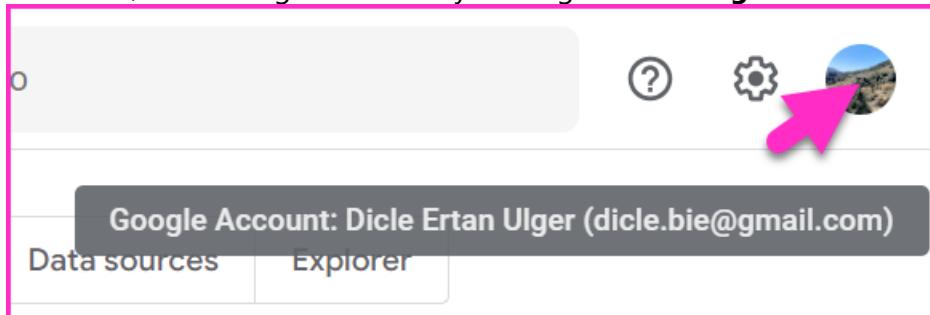
<https://lookerstudio.google.com/>

When I type in this address, the screen opens up in my other / main google account.

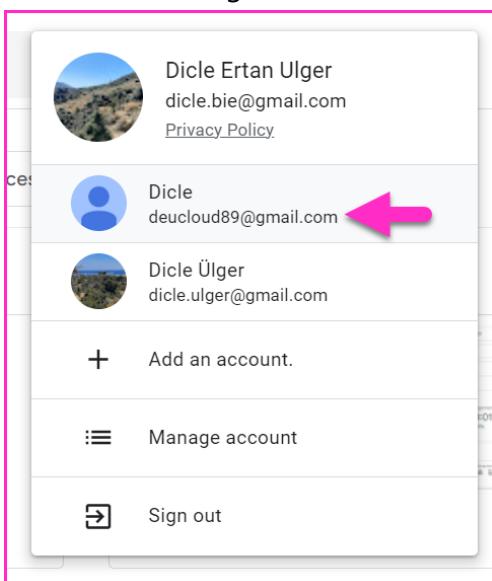
However, what I want is the account where I created the BigQuery SQL.



Therefore, I will change accounts by clicking on the **Google Account** icon / on my Profile image.



I click on the image.



All of my Google Accounts are listed.
I select the one with the free GCP account, where I started creating the Looker Report.

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When the screen is refreshed after a short while, I can see the Looker Report that I started to work on.

The screenshot shows the Looker Studio interface with a pink border. At the top, there's a navigation bar with 'Looker Studio', a search bar, and user settings. Below it, tabs for 'Recent', 'Reports' (which is selected), 'Data sources', and 'Explorer' are visible. On the left, a sidebar shows 'Shared with me', 'Owned by me', and a 'Bin'. Under 'Templates', there's a section for 'Start with a Template' with options like 'Blank Report Looker Studio', 'GA4 Report Google Analytics', 'ACME Acme Marketing Google Analytics', and 'Search Console Report Search Console'. The main area shows a table of recent reports with columns for 'Name', 'Owned by anyone', 'Last opened by me', and 'Location'. A pink arrow points to the 'Name' column of the first row, which contains 'Countries by Join Year'.

Name	Owned by anyone	Last opened by me	Location
Countries by Join Year	Dicle	09:38	Owned by me

This screenshot shows a detailed view of the 'Recent' report table. It has the same columns: 'Name', 'Owned by anyone', 'Last opened by me', and 'Location'. The single row shows 'Countries by Join Year' as the report name, owned by 'Dicle', last opened at 09:38, and categorized under 'Owned by me'.

Name	Owned by anyone	Last opened by me	Location
Countries by Join Year	Dicle	09:38	Owned by me

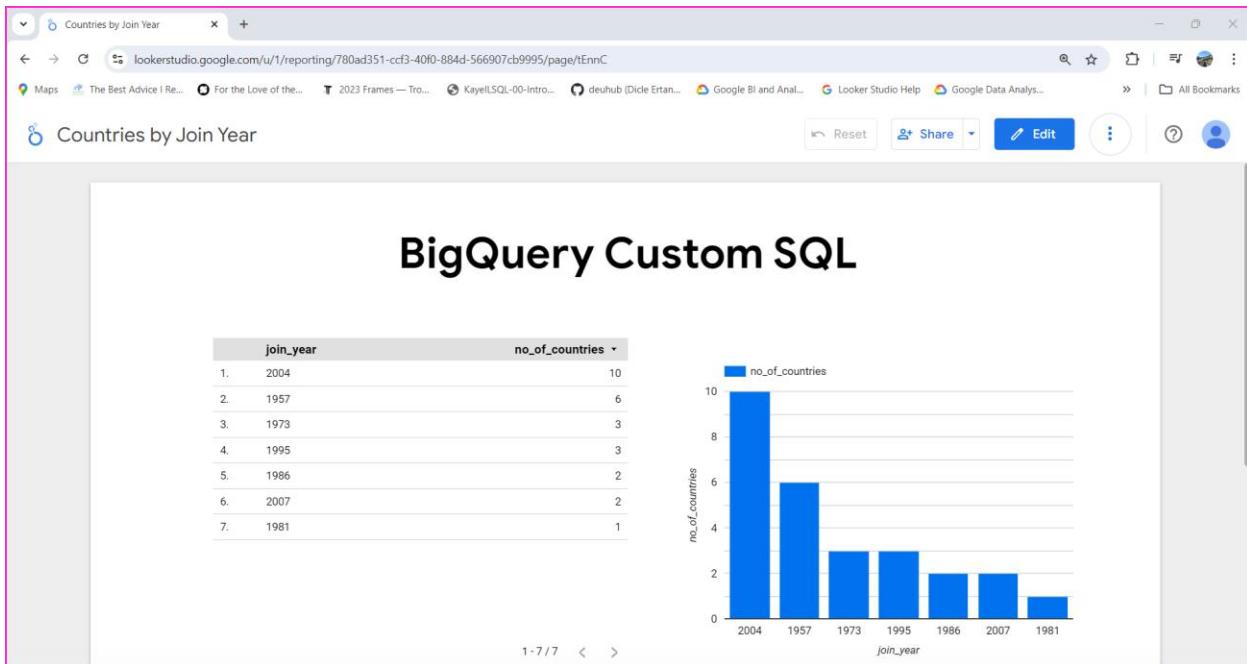
This is where my report is.

To access my report, I simply click on the report name.

This screenshot shows a close-up of the 'Name' column in the 'Recent' report table. The report name 'Countries by Join Year' is highlighted with a large pink arrow pointing directly at it.

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And... here I am.



I will now customize my report.

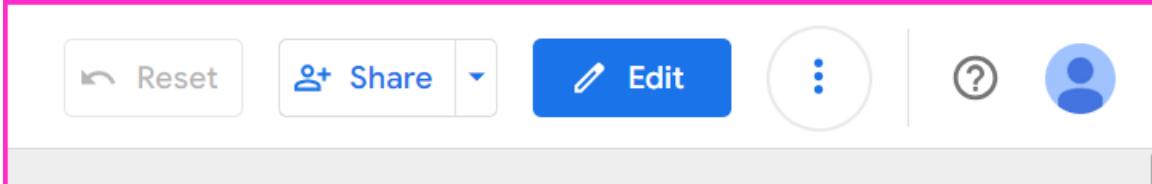
View and Edit Modes

This report is now in **View Mode**.

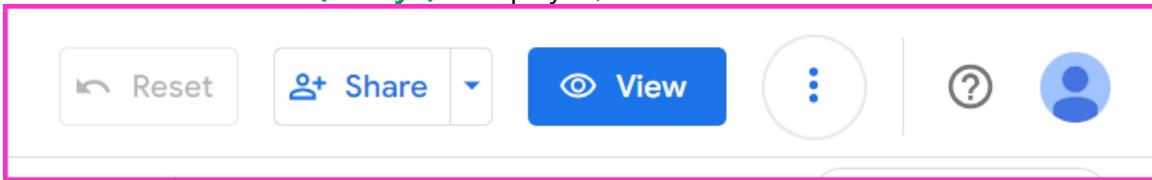
To be able to customize it, I have to be in **Edit Mode**.

How do I know which Mode I am in?

When the **Edit button (the pen)** is displayed, I am in **View Mode**.



When the **View button (the eye)** is displayed, I am in **Edit Mode**.



To **change Modes**, I simply click on the button.

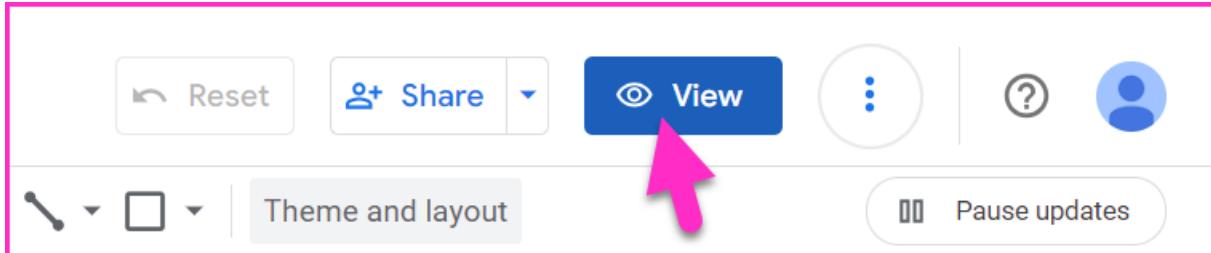
In **Edit Mode**, I will customize / change my Report.

In **View Mode**, I will view my customizations / changes.

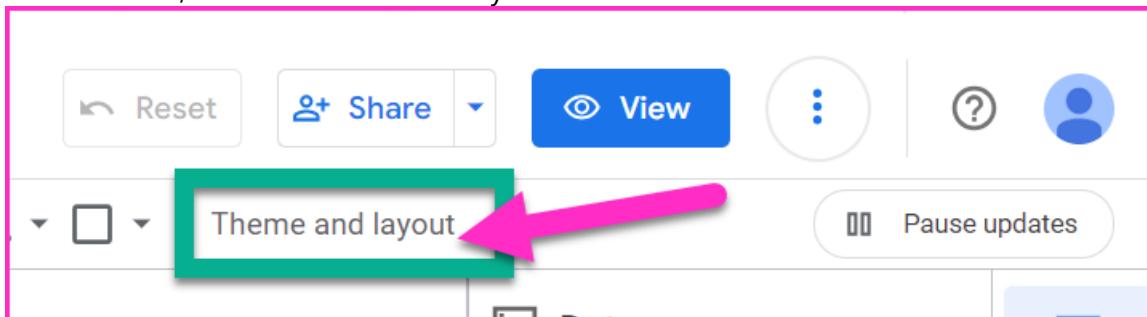
Change the Report Theme

I will now change the report Theme.

I have to be in **Edit Mode**.



In **Edit Mode**, I click on Theme and layout.



Theme and Layout panel is displayed.

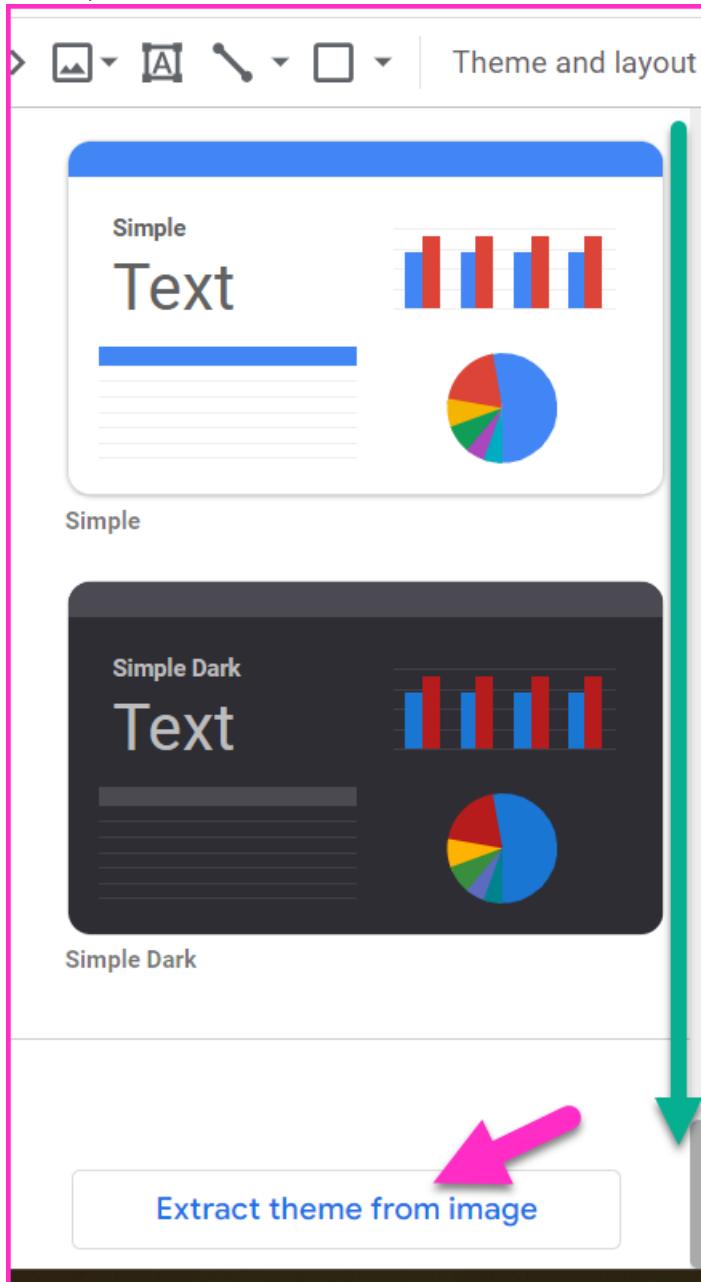
The screenshot shows the Looker Studio interface with the 'Theme and Layout' panel open. The panel is titled 'Theme and Layout' and contains two tabs: 'THEME' and 'LAYOUT'. Under 'THEME', there is a section for 'Current theme' set to 'Default', and a 'Customise' button. Below this are two preview cards: one for 'Default' showing a bar chart and pie chart, and another for 'Edge' showing a bar chart. At the bottom of the panel is a button labeled 'Extract theme from image'. The main workspace displays a chart titled 'BigQuery Custom SQL' showing the number of countries joined over time, and a table titled 'Countries by Join Year' with data from 2004 to 1981. The toolbar at the top includes buttons for 'Reset', 'Share', 'View', and 'Pause updates'. The status bar at the bottom shows the date and time.

I scroll down the **Theme and Layout** panel.

I can see several themes.

However, I am going to **extract a theme from an image**.

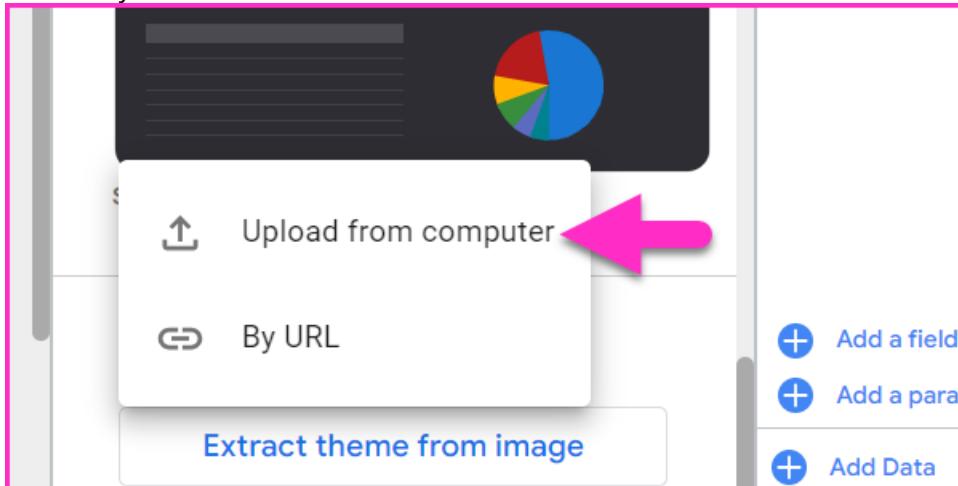
Hence, I click on that button -- **Extract theme from image**.



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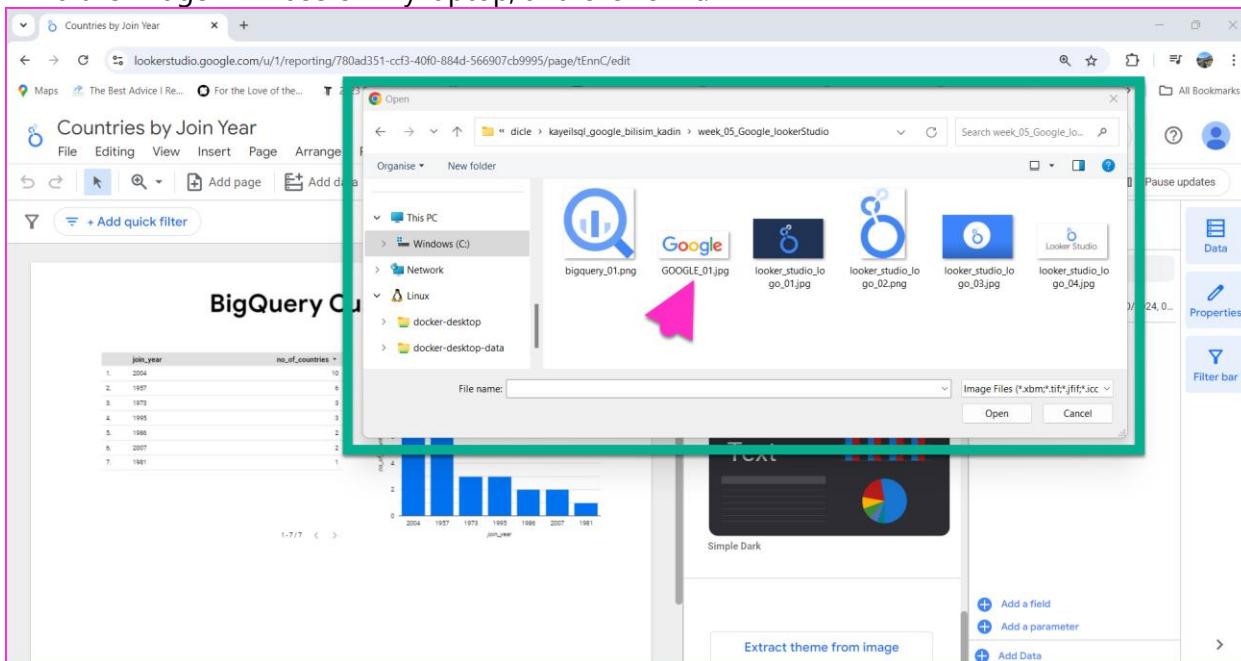
Looker gives me two choices.

- ➊ Upload from computer
- ➋ By URL

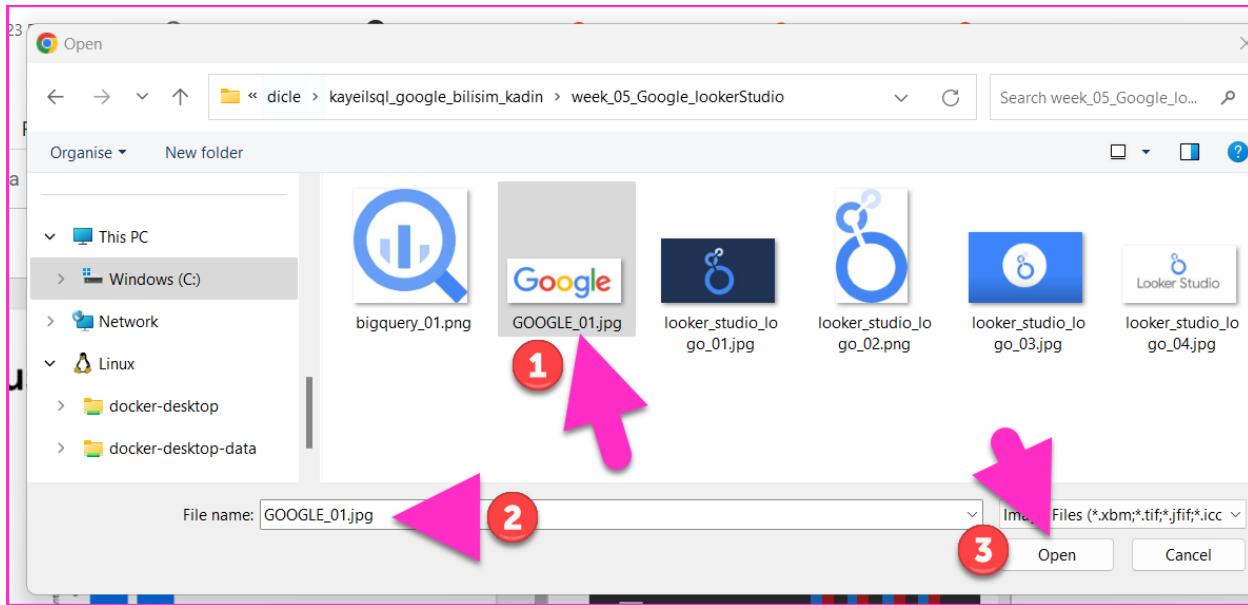


This time, I will change the theme, using an image on my laptop.
Hence, I click on **Upload from computer**.

I find the image I will use on my laptop, and click on it.

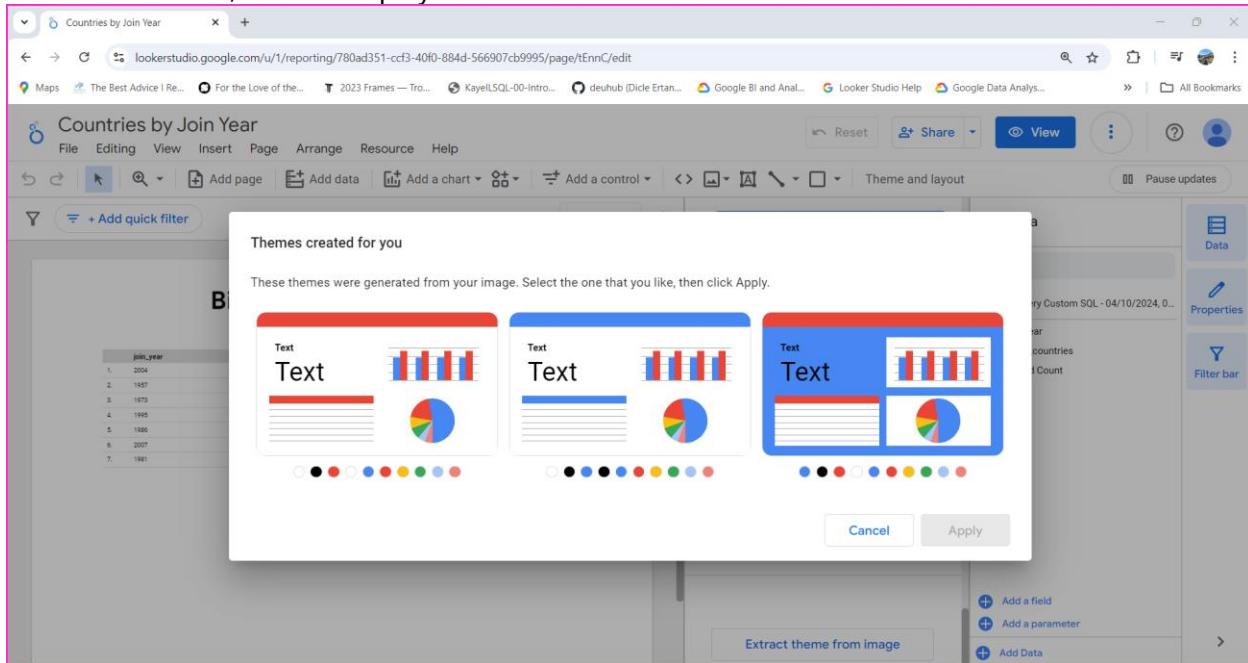


KayeilSQL Google Looker Studio



1. Click on the image
2. Image name appears on the File name.
3. Click on Open.

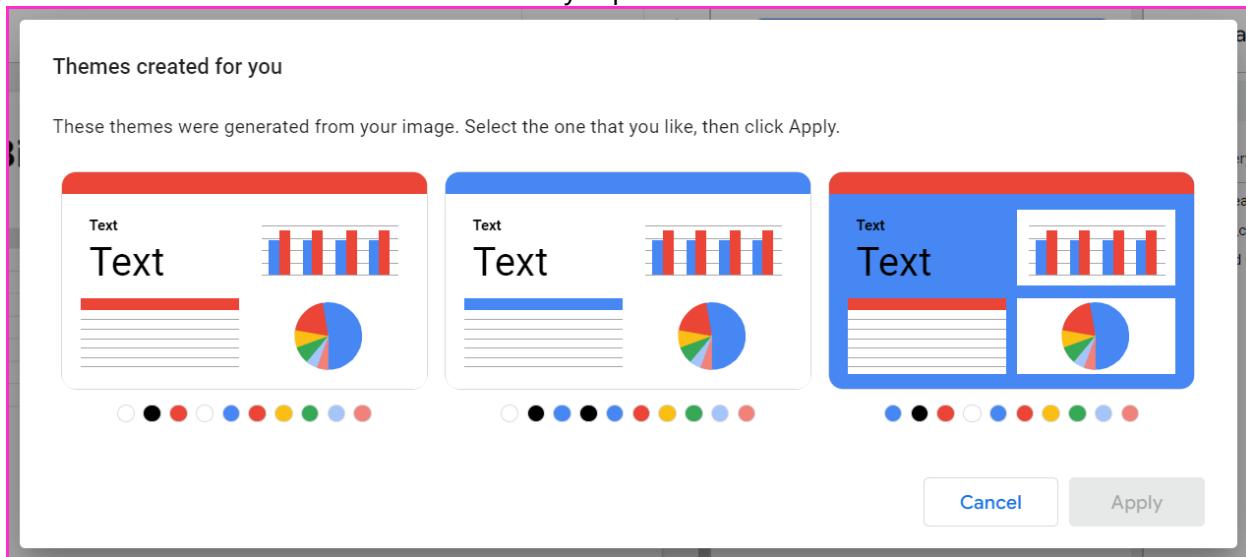
A little while later, Looker displays a window.



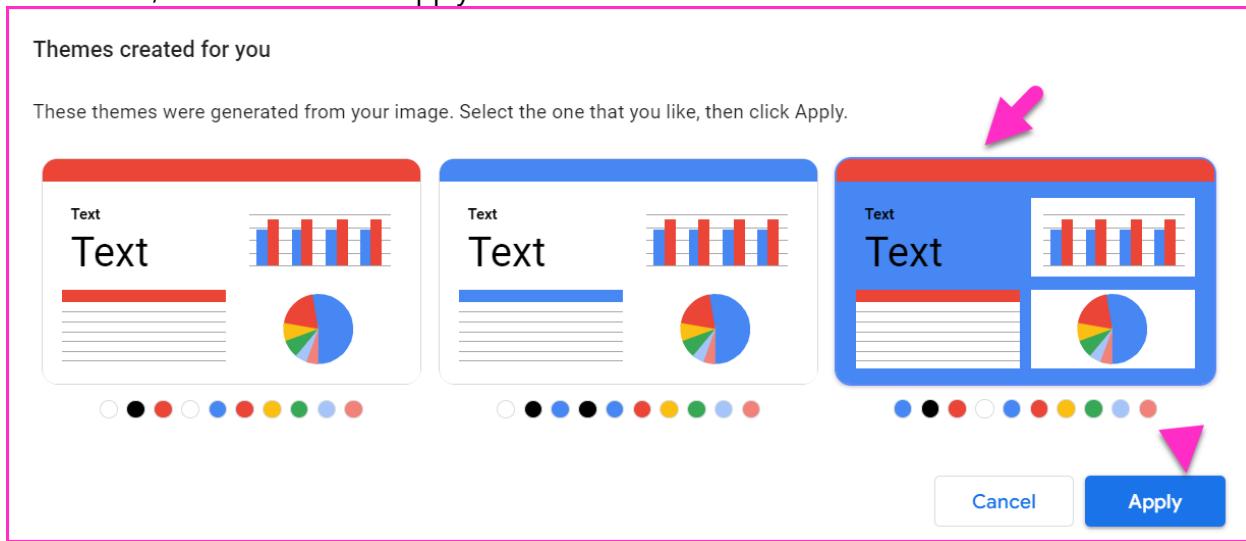
KayellSQL Google Looker Studio

Looker generated some themes from the image I uploaded.

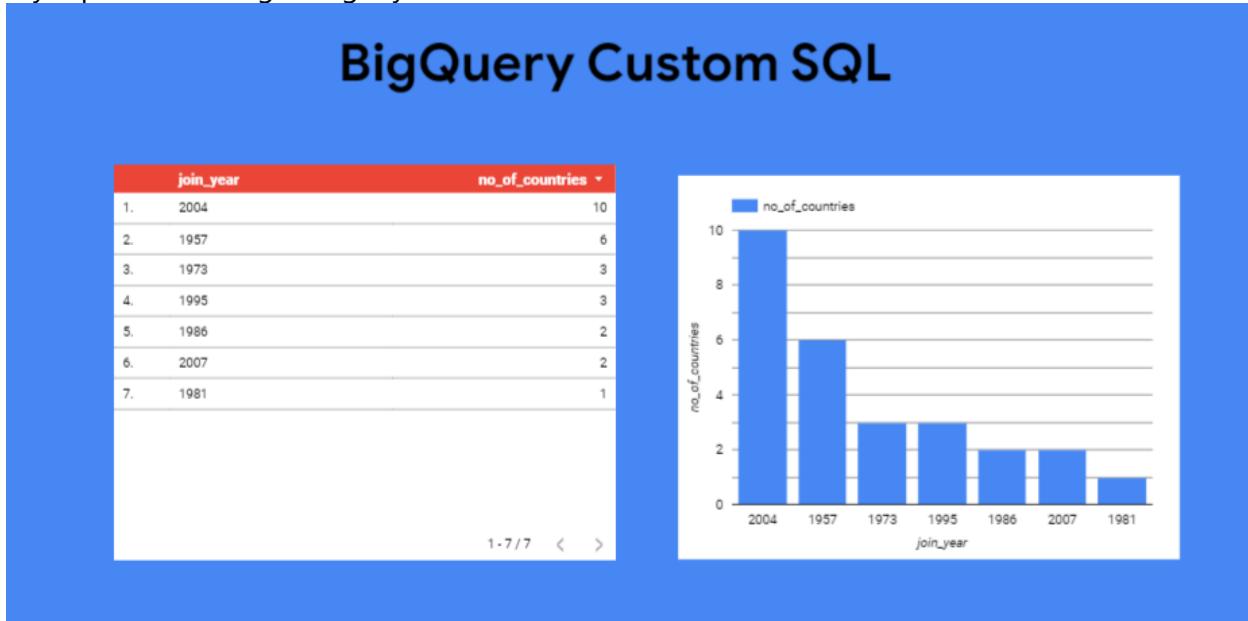
I can select the one I would like to use in my report.



I select one, and then click on Apply.



My report has changed slightly.



Change the Page Title

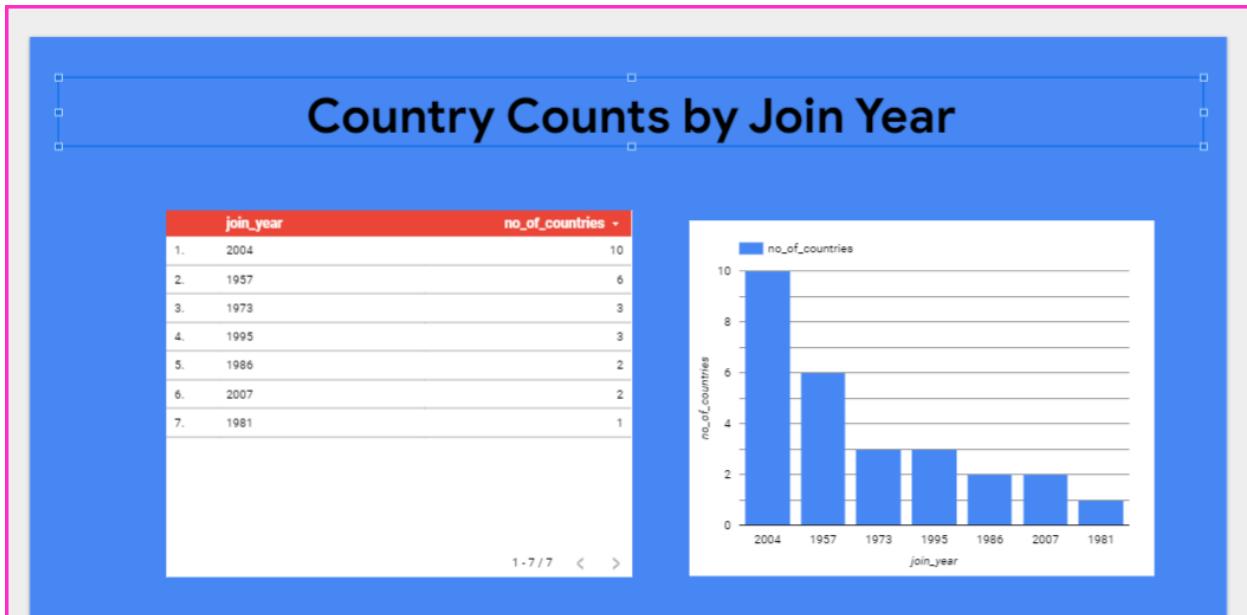
I will now change the page title.

When I click on the title, Text Properties panel is displayed.

The screenshot shows the Google Looker Studio editor interface. A pink box highlights the entire editor area. On the right, the "Text Properties" panel is open, showing font and paragraph settings. A pink arrow points to the "Text Properties" tab. Another pink arrow points to the title "BigQuery Custom SQL" in the main content area, which is currently being edited.

I simply type over the title to change the name.

Here is my new page title.



I will also change the text color.

I select the page title text.

I click on the text color on the right, and select a color from the palette.

Y + Add quick filter

Reset

Text Properties

Font and Paragraph

Search

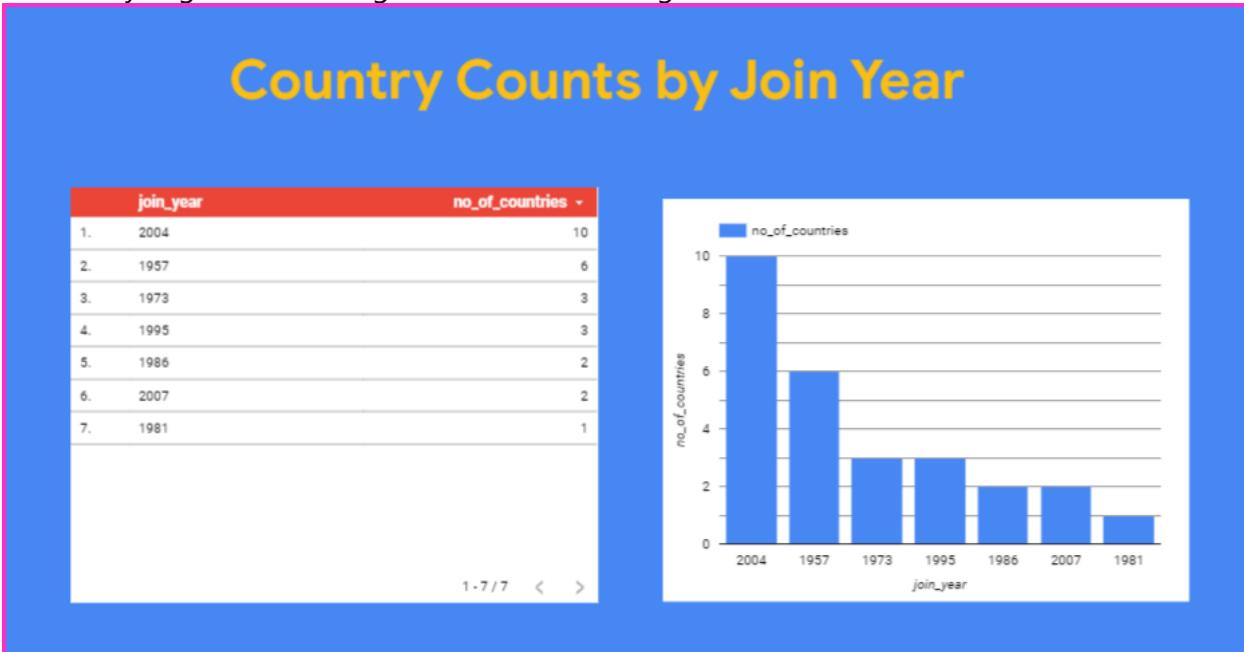
Chart palette 3

Custom

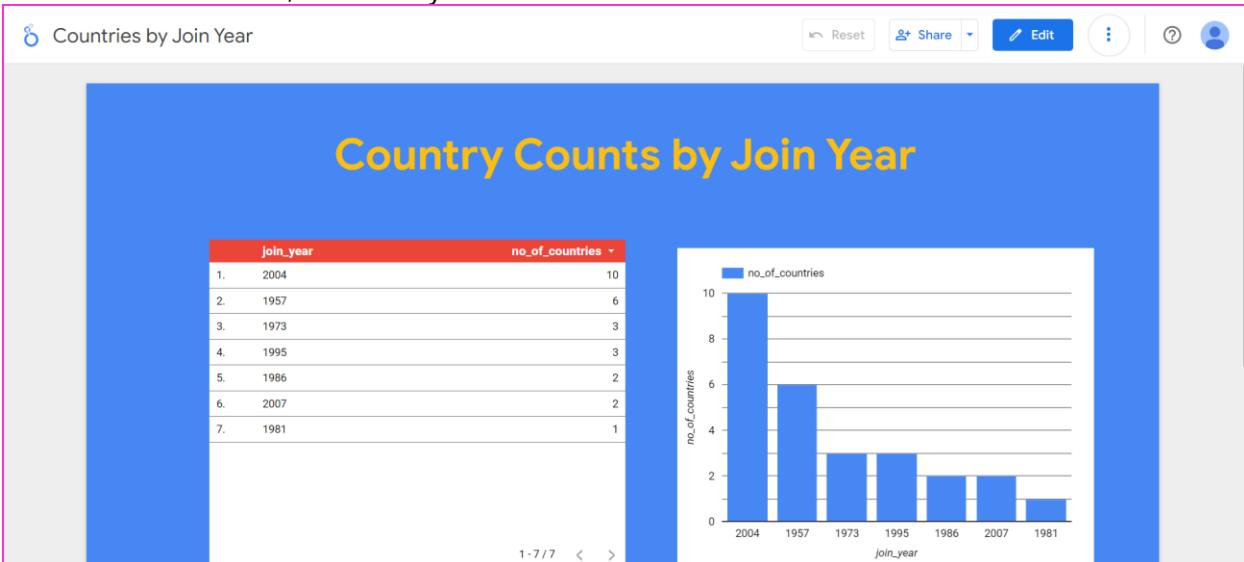
visible

KayellSQL Google Looker Studio

Here is my Page Title wording and color have changed.

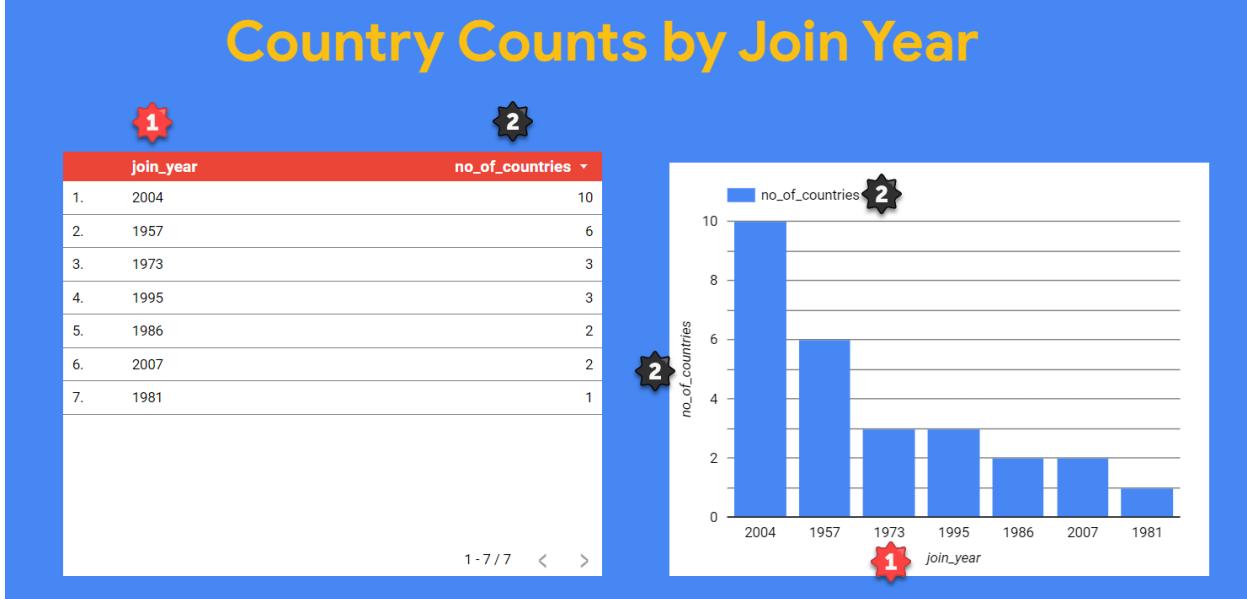


I switch to View Mode, to view my customizations so far.



Change the Field Labels

I am happy with my report so far, however I want to change the Field Labels.



One. I will change **join_year** to **Year of Joining the EU**

Two. I will change **no_of_countries** to **Number of Countries**.

I can do this in the **Data Sources** screen.

Data Sources

I can go to the **Data Sources** screen via **Resource / Manage added data sources**.

I click on **Resource**.

Countries by Join Year

File Editing View Insert Page Arrange Resource Help

Reset Share View

Add page Add a chart Add a control > Theme and layout Pause updates

+ Add quick filter

Country Counts by Join Year

join_year	no_of_countries
1. 2004	10
2. 1957	6
3. 1973	3
4. 1995	3
5. 1986	2
6. 2007	2
7. 1981	1

no_of_countries

Join Year

Let's get started

Drag a field from the Data Panel to the canvas to add a new chart or select a component on the report canvas to edit it.

Data

Search

BigQuery Custom SQL - 04/10/2024, 0 rows

join_year

no_of_countries

Record Count

Data

Properties

Filter bar

Add a field

Add a parameter

Add Data

KayellSQL Google Looker Studio

I then click on **Manage added data sources**.

The screenshot shows a Looker Studio report titled "Countries by Join Year". The "Resource" menu is open, and the "Manage added data sources" option is highlighted with a pink arrow. The menu also includes options like "Manage blends", "Manage segments", "Manage filters", "Manage dimension value colours", "Manage report URL parameters", and "Manage community visualisations".

Data Sources screen is displayed.

The screenshot shows the "Data sources" screen in Looker Studio. It lists a single data source: "BigQuery Custom SQL - 04/10/202...". The "Actions" column for this entry includes "EDIT", "DUPLICATE", "REMOVE", and "MAKE REUSABLE". A pink arrow points to the "EDIT" button. The "Data sources" tab is also highlighted with a pink arrow.

I can see the Data Source of my Looker Report.

The screenshot shows the "Data sources" screen in Looker Studio, displaying a single data source entry: "BigQuery Custom SQL - 04/10/202...". The "Connector type" is listed as "BigQuery".

Edit the Data Source

I click on the **EDIT button** of my Data source.

The screenshot shows the "Data sources" screen in Looker Studio. It lists a single data source: "BigQuery Custom SQL - 04/10/202...". The "Actions" column for this entry includes "EDIT", "DUPLICATE", "REMOVE", and "MAKE REUSABLE". A pink arrow points to the "EDIT" button.

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I wait a little while for the Data Source to be loaded.
And here it is.

The screenshot shows the Google Looker Studio interface. At the top, there's a navigation bar with 'File', 'Editing', 'View', 'Insert', 'Page', 'Arrange', 'Resource', and 'Help'. Below the navigation bar, the title 'Countries by Join Year' is displayed. Underneath the title, there's a breadcrumb trail: 'BigQuery Custom SQL - 04/10/2024, ...'. To the right of the breadcrumb, there are filters for 'Scope: Embedded', 'Data credentials: Viewer', and 'Data freshness: 12 hours'. Below the breadcrumb, there are two buttons: 'EDIT CONNECTION' and 'FILTER BY EMAIL'. The main content area is divided into sections: 'DIMENSIONS (2)' and 'METRICS (1)'. In the 'DIMENSIONS (2)' section, there are two entries: 'join_year' and 'no_of_countries', both of which are of type 'Number' and have 'Sum' as their default aggregation. In the 'METRICS (1)' section, there is one entry: 'Record Count', which is of type 'Number' and has 'Auto' as its default aggregation.

Change the Field Names

I will simply type over the two DIMENSIONS and change their names.

This screenshot is similar to the previous one, showing the 'Countries by Join Year' query in Google Looker Studio. The 'DIMENSIONS (2)' section contains two entries: 'join_year' and 'no_of_countries'. Two large pink arrows point from the left towards each of these two entries, indicating where the user should click to edit them. The rest of the interface, including the 'File', 'Editing', 'View', 'Insert', 'Page', and 'Arrange' menu items, the breadcrumb trail, and the metric section, remains the same.

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One. I change **join_year** to **Year of Joining the EU**

DIMENSIONS (2)

- join_year
- no_of_countries

DIMENSIONS (2)

- Year of Joining the EU
- no_of_countries

Two. I change **no_of_countries** to **Number of Countries**.

DIMENSIONS (2)

- Year of Joining the EU
- no_of_countries

METRICS (1) no_of_countries

DIMENSIONS (2)

- Year of Joining the EU
- Number of Countries

I changed the names of both of my Dimension Fields.
I will not change anything else.

Click on FINISHED

I now click on **FINISHED**.

Countries by Join Year

File Editing View Insert Page Arrange Resource Help

← BigQuery Custom SQL - 04/10/2024, ... Scope: @Embedded Data credentials: Viewer Data freshness: 12 hours Community visualisations access: Off Native functions: Off FINISHED

← EDIT CONNECTION | FILTER BY EMAIL

ADD A FIELD ADD A PARAMETER

Field Type Default Aggregation Description

DIMENSIONS (2)

Field	Type	Default Aggregation	Description
Year of Joining the EU	123 Number	Sum	
Number of Countries	123 Number	Sum	

KayellSQL Google Looker Studio

Click on Close

On the next screen, after I clicked FINISHED, I click on **Close**.

Countries by Join Year

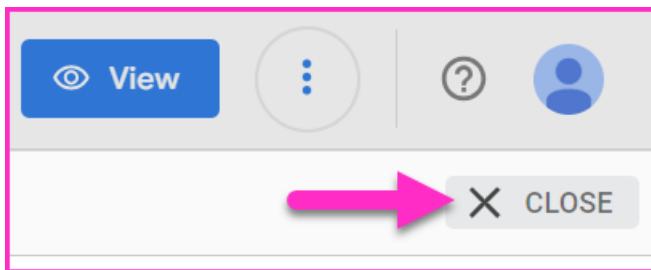
File Editing View Insert Page Arrange Resource Help

Data sources

Name	Connector type	Type	Used in report	Status	Actions	Alias
BigQuery Custom SQL - 04/10/202...	BigQuery	Embedded	2 charts	Working	EDIT DUPLICATE REMOVE MAKE REUSABLE	ds5

[ADD A DATA SOURCE](#)

X CLOSE



KayellSQL Google Looker Studio

Back to the Report Screen

Here I am back to my report screen.

My Data field names have changed.

Data Panel is on the right.

The screenshot shows a report titled "Country Counts by Join Year". On the left, there is a table with the following data:

join_year	no_of_countries
1. 2004	10
2. 1957	6
3. 1973	3
4. 1995	3
5. 1986	2
6. 2007	2
7. 1981	1

On the right, there is a bar chart showing the same data. The Data Panel on the far right is highlighted with a green box. It contains a search bar and three items listed under "BigQuery Custom SQL - 04/10/2024, 0...":

- 123 Number of Countries
- 123 Year of Joining the EU
- 123 Record Count

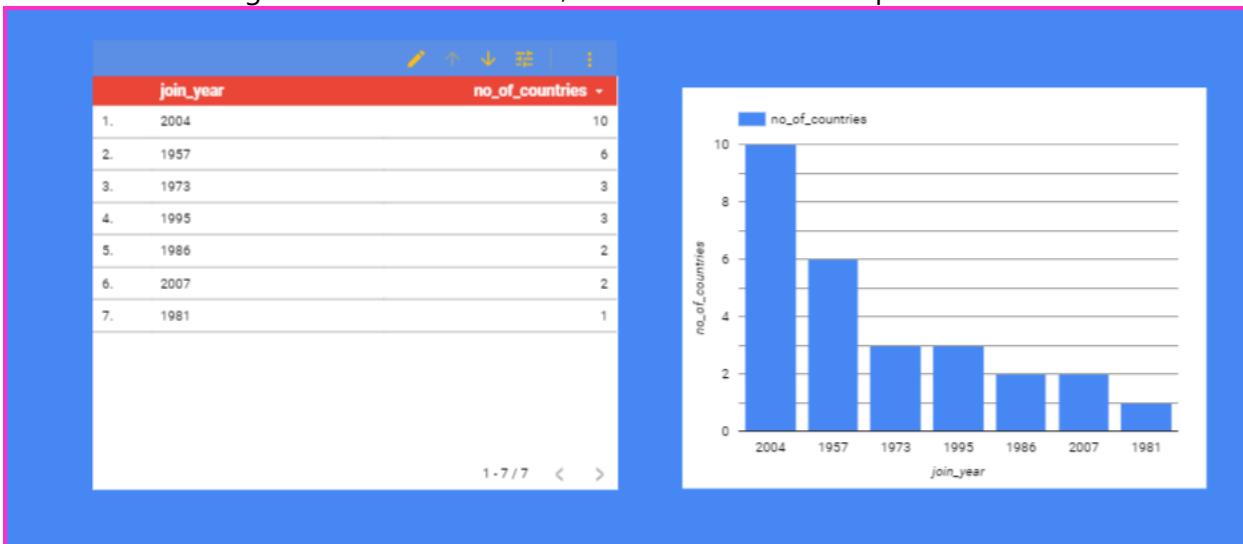
The screenshot shows the Data Panel. It features a search bar at the top and a list of three data fields below it:

- 123 Number of Countries
- 123 Year of Joining the EU
- 123 Record Count

KayellSQL Google Looker Studio

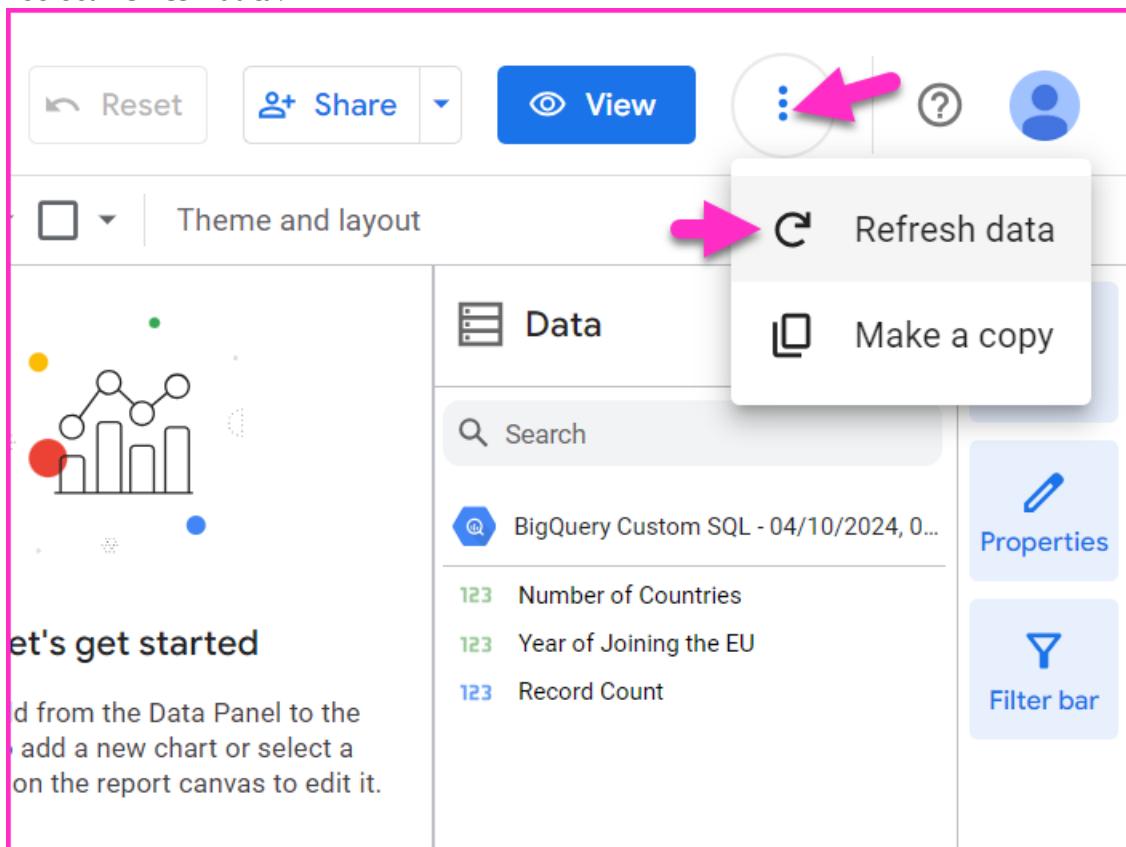
However my Chart field names did not change.

To be able to change the Chart field names, I have to Refresh the report data.

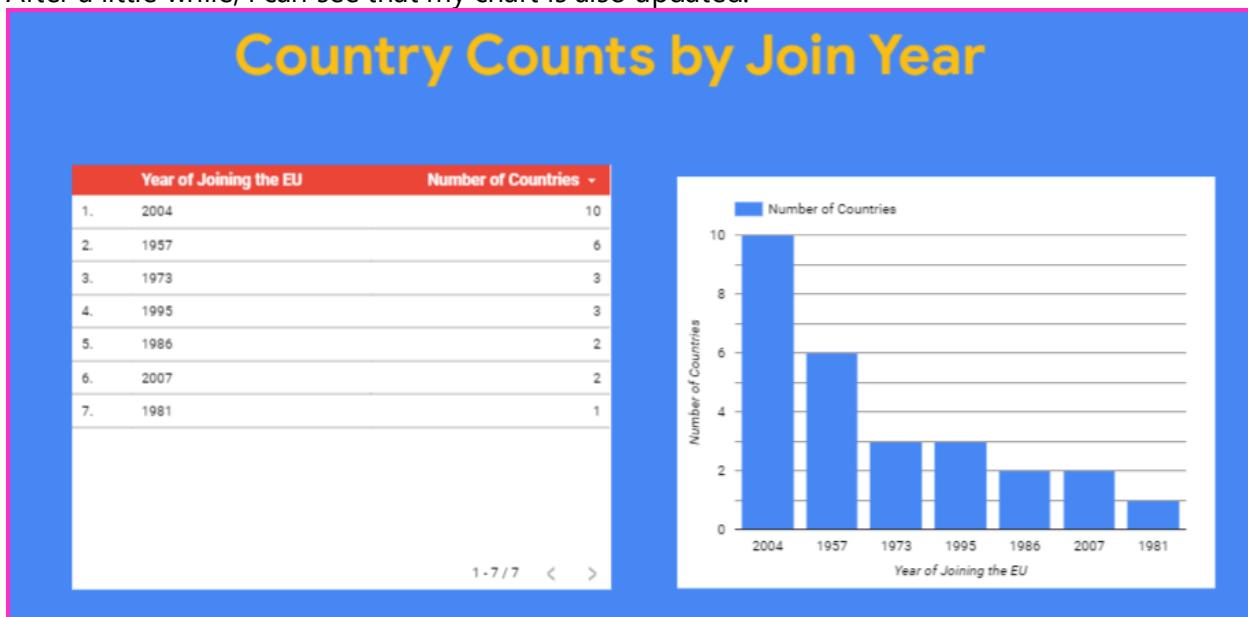


Refresh Data

Next to the **View Button**, I click on the **three vertical dots**.
I select **Refresh data**.



After a little while, I can see that my chart is also updated.



Charts are now Updated

Table Chart is updated

The screenshot shows the Google Looker Studio interface. On the left, there is a table titled "Country Counts by Join Year" with the following data:

Year of Joining the EU	Number of Countries
1. 2004	10
2. 1957	6
3. 1973	3
4. 1995	3
5. 1986	2
6. 2007	2
7. 1981	1

To the right of the table is a bar chart with the same data, titled "Number of Countries" vs "Year of Joining the EU". The chart shows the count of countries joining the EU in 2004 (10), 1957 (6), 1973 (3), 1995 (3), 1986 (2), 2007 (2), and 1981 (1).

I can see that the **Table Chart Headers** are updated with the new Dimension Field Names.

Year of Joining the EU	Number of Countries
1. 2004	10
2. 1957	6
3. 1973	3
4. 1995	3
5. 1986	2
6. 2007	2
7. 1981	1

Column Bar Chart is updated

Country Counts by Join Year

Year of Joining the EU	Number of Countries
1. 2004	10
2. 1957	6
3. 1973	3
4. 1995	3
5. 1986	2
6. 2007	2
7. 1981	1

I can see that the **axis labels** have changed.

X-AXIS Dimension Year of Joining the EU

Y-AXIS Metric Number of Countries

Chart

SET-UP

Dimension

- 123 Year of Joining the EU
- + Add dimension

Drill down

Default drill down level
Year of Joining the EU

Breakdown Dimension

+ Add dimension

Metric

SUM Number of Countries

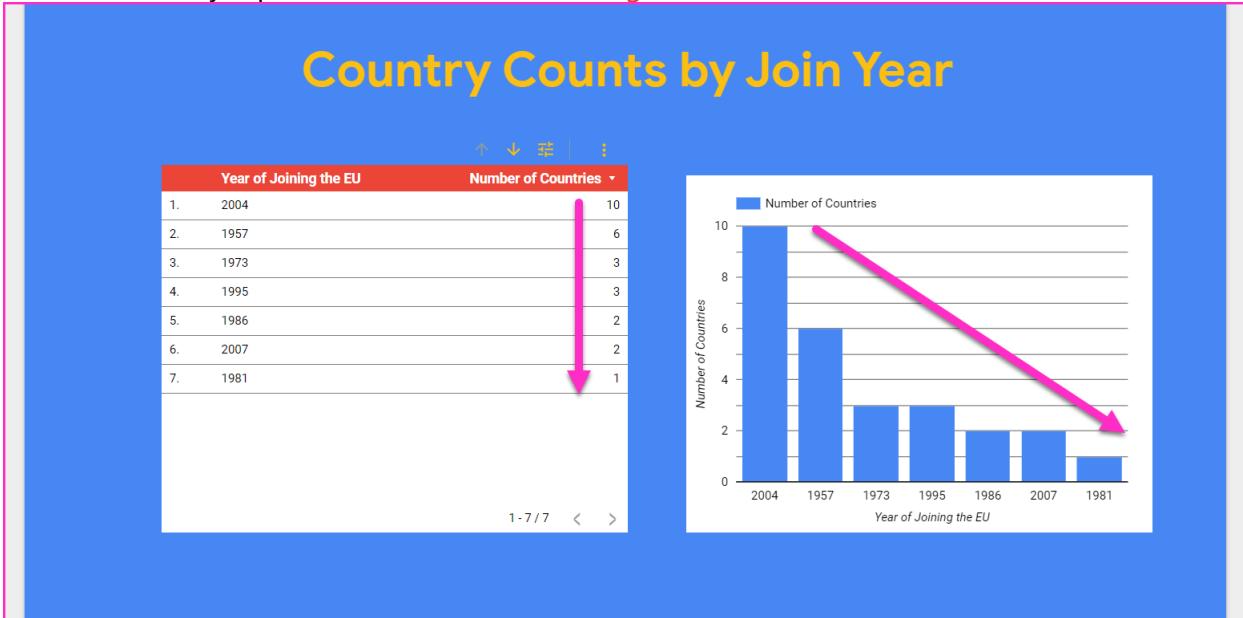
+ Add metric

Optional metrics

*** I was able to do these changes by **renaming the Fields** in my **Data Source**. ***

Sort (Order) the Report Data

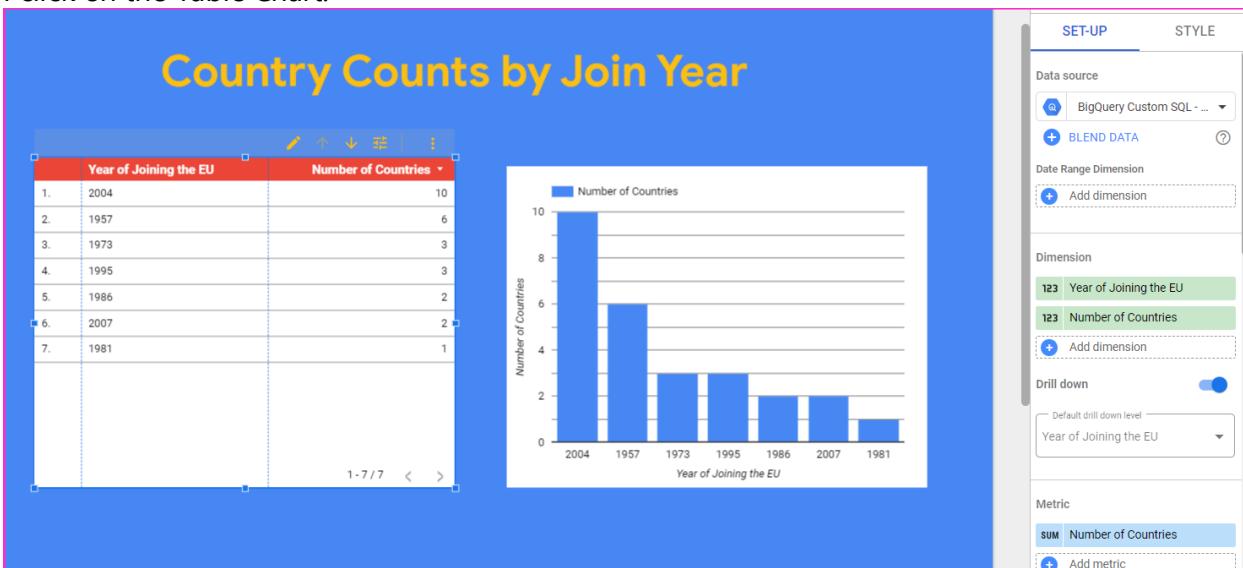
I noticed that my report is ordered in Descending Order of the Number of Countries.



However, I want to order my report in "Year of Joining the EU".

Order Data in Table Chart

I click on the Table Chart.



In **SET-UP**, I scroll down, and find **Sort**.

The screenshot shows the 'SET-UP' tab selected in the Looker Studio interface. In the 'Sort' section, there is a blue button labeled 'SUM' and a field labeled 'Number of Countries'. A pink arrow points to the 'Number of Countries' field. Below this, there are two radio button options: 'Descending' (selected) and 'Ascending'. A vertical pink arrow on the right side of the screen points downwards from the 'Sort' section towards the bottom of the page.

Chart Data

SET-UP STYLE

Search

Top N

Per page
50

Sort

SUM Number of Countries

Descending

Ascending

Secondary sort

Add sort

Descending

Ascending

Filter

BigQuery Custom

Number of Countries

Year of Joining

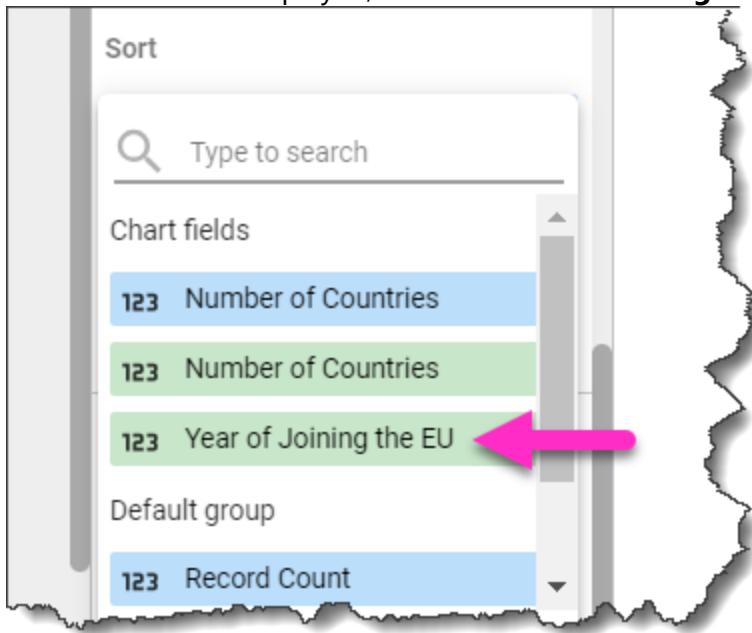
Record Count

Add a field

Add a parameter

I click on **Number of Countries**.

In the list of fields displayed, I click on **Year of Joining the EU**.



In a short while, my Table Chart is updated.

I can see that the chart is **now ordered in the Year of Joining the EU**.

Number of Countries is **no more** the **Sort Field**.

	Year of Joining the EU	Number of Countries
1.	2007	2
2.	2004	10
3.	1995	3
4.	1986	2
5.	1981	1
6.	1973	3
7.	1957	6

However, the **Year is in Descending Order.**

This is the Report Default.

Year of Joining the EU	Number of Countries
1. 2007	2
2. 2004	10
3. 1995	3
4. 1986	2
5. 1981	1
6. 1973	3
7. 1957	6

I would like my Chart to be ordered in **Ascending Year Order.**

Hence, I click on Ascending.

KayellSQL Google Looker Studio

As soon as I click on **Ascending**, my Table Chart is Updated.

It is now in **Ascending Order of the Year**.

The screenshot shows a table chart with a blue header bar containing icons for sorting, filtering, and more. The table has two columns: "Year of Joining the EU" and "Number of Countries". The data is as follows:

Year of Joining the EU	Number of Countries
1. 1957	6
2. 1973	3
3. 1981	1
4. 1986	2
5. 1995	3
6. 2004	10
7. 2007	2

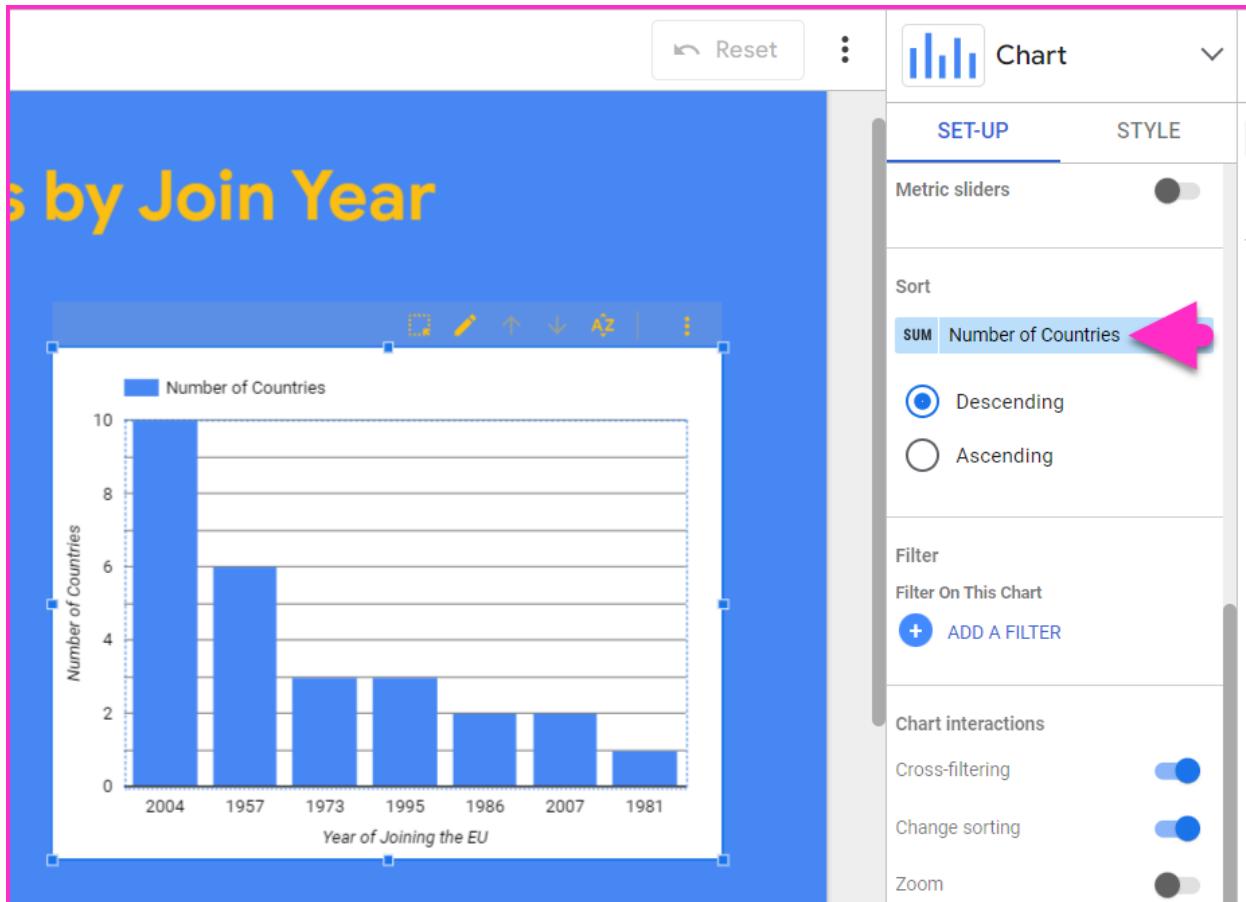
At the bottom, there is a page navigation bar showing "1 - 7 / 7" and arrows for navigating between pages.

Order Data in Column Bar Chart

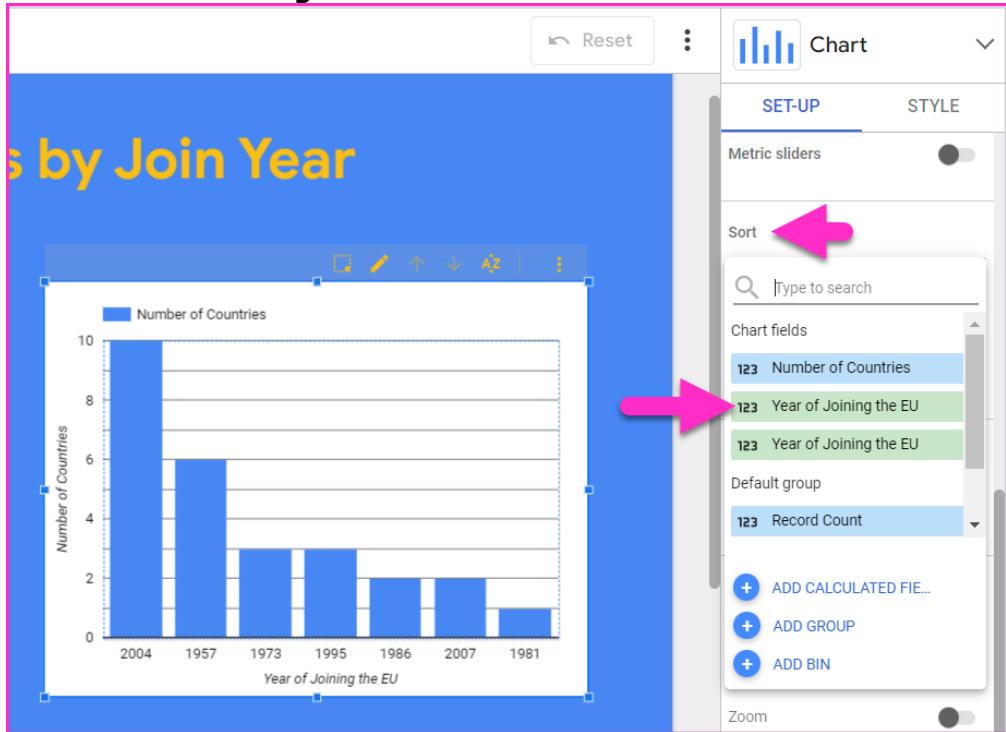
I will now order the Column Bar Chart.

I will go through similar steps as I have done in my Table Chart.

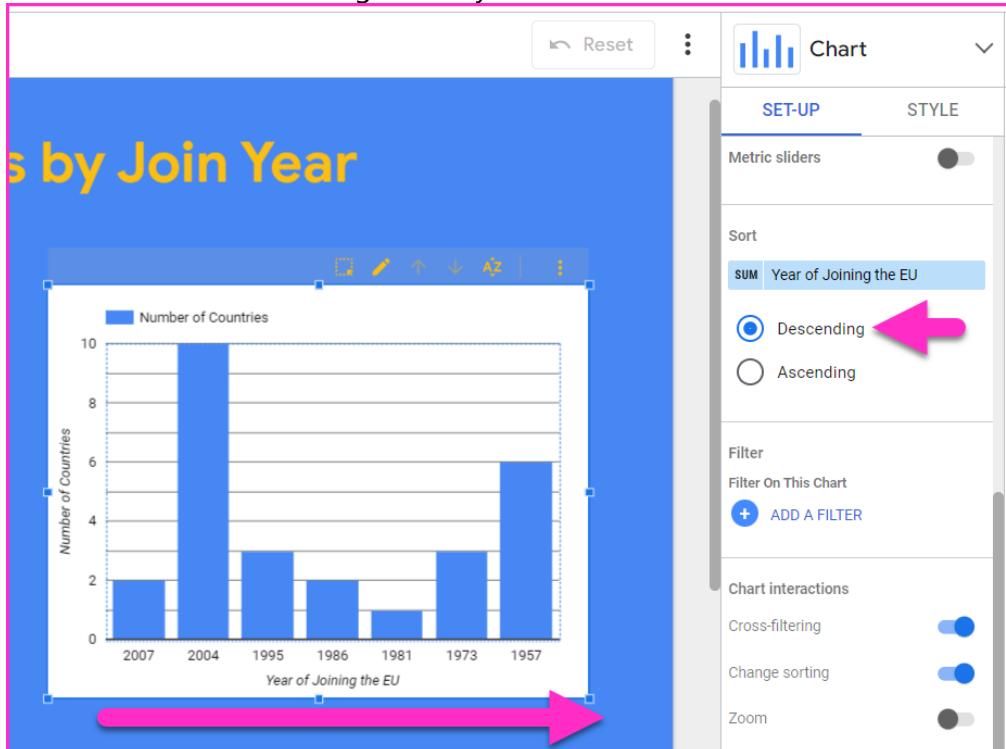
I click on the **Sort** column of **Number of Countries**.



I select **Year of Joining the EU**.

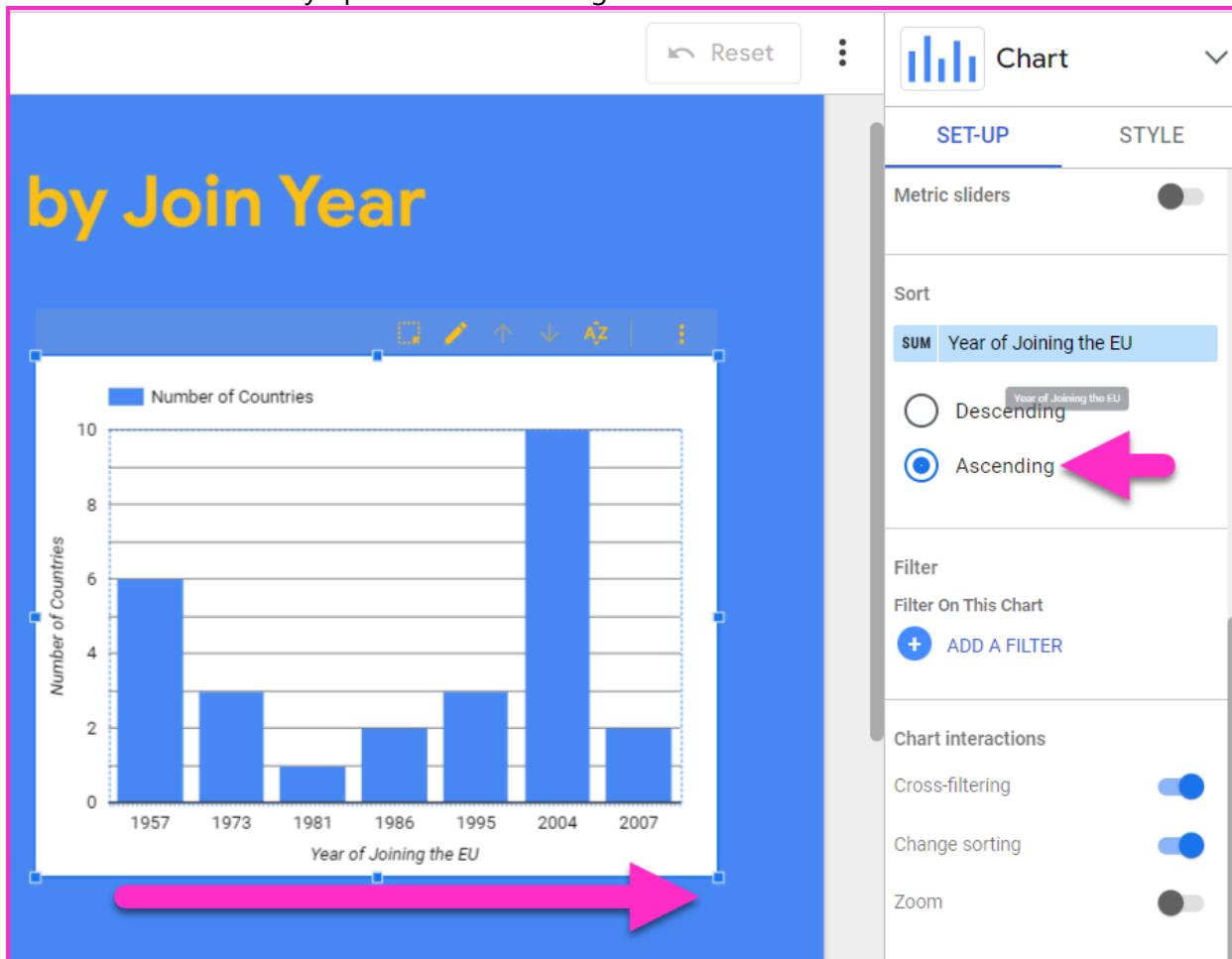


My Chart is immediately ordered in Years.
However, it is in Descending order by default.



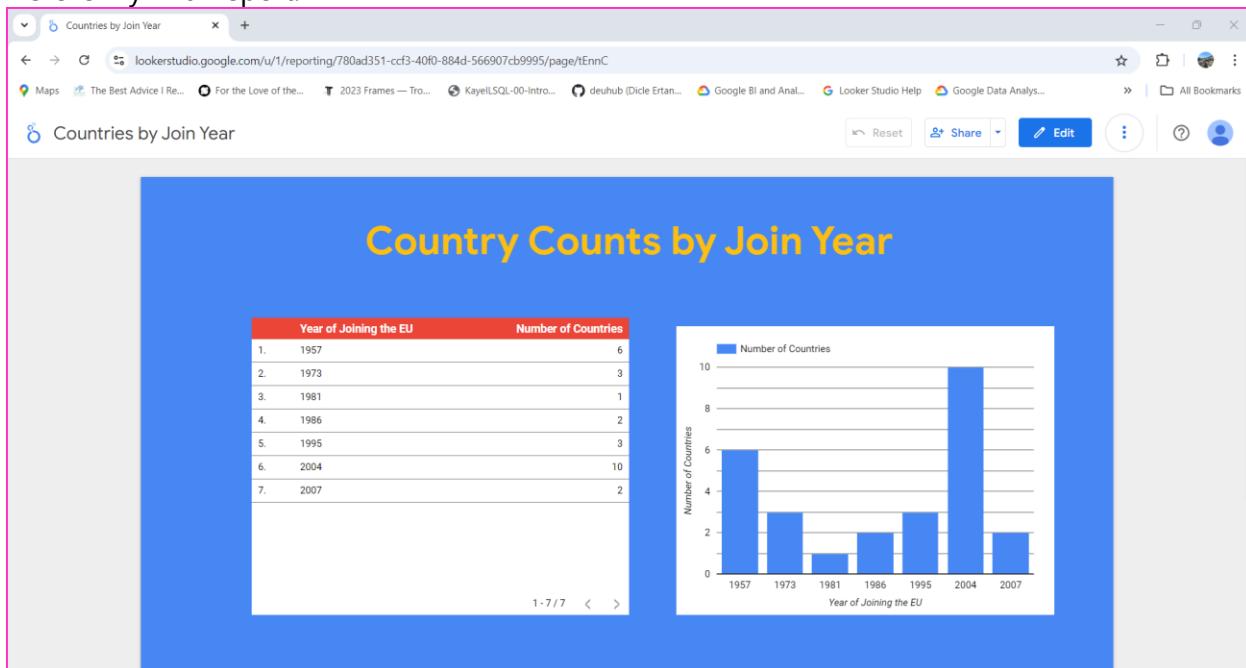
I select Ascending.

The chart is immediately updated in Ascending Order of Years.



View Customizations

I switch to the View Mode to view my customizations.
Here is my final report.



I am happy with my Looker Studio Report.
This resumes Report One.



About Ascending and Descending

Here are some screenshots from **Kaye is Learning SQL** which explains the meaning of **Ascending** and **Descending**.

Ascending

https://deuhub.github.io/KayeSQL-05-Oracle-Queries/public/KayeSQL-05-OracleQueries.htm#order_by_mean_asc

Meaning of ASCENDING

Merriam-Webster Dictionary

<https://www.merriam-webster.com/dictionary/ascending>

Here is the **Definition of Ascending** in **Merriam-Webster Dictionary**:

- rising or increasing to higher levels, values, or degrees
- mounting or sloping upward

ASCENDING a Mountain — Going **UP** a Mountain:



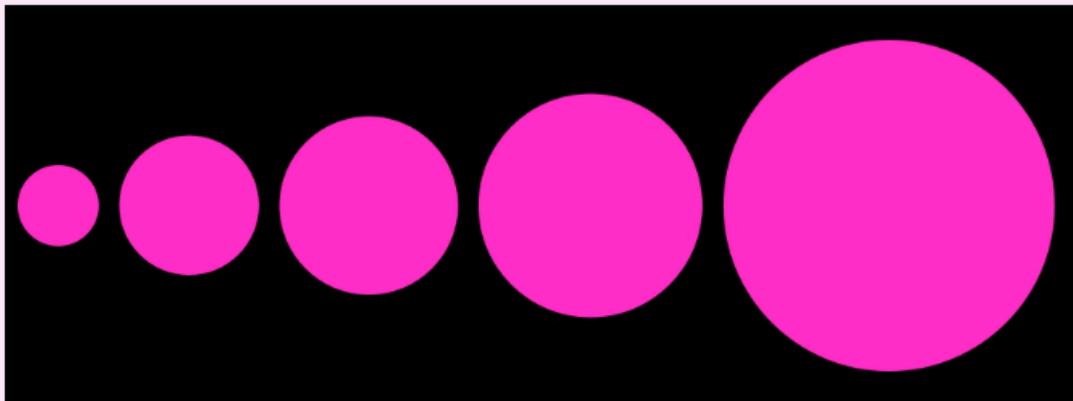
Cambridge Dictionary

<https://dictionary.cambridge.org/dictionary/english/ascending>

Definition of Ascending in Cambridge Dictionary:

increasing in size or value

These Circles are in **ASCENDING ORDER** of Size —
they are **INCREASING** in Size:



We can say that;

- **ASCENDING** is Going **UP** ↑
- **ASCENDING** is **INCREASING** in Value or in Size

Descending

https://deuhub.github.io/KayelSQL-05-Oracle-Queries/public/KayelSQL-05-OracleQueries.htm#order_by_mean_desc

Meaning of DESCENDING

DESCENDING is the **OPPOSITE** of **ASCENDING**.

Hence, **DESCENDING** is;

- going downwards
- decreasing to lower levels or to lower values
- decreasing in size or in value

Here is a **DESCENDING** elevator in a skyscraper.
It is going **DOWN** from the 21st Floor.



These beads are in **DESCENDING ORDER** of Size — they are **DECREASING** in Size:



We can say that;

- **DESCENDING** is Going **DOWN** 
- **DESCENDING** is **DECREASING** in Value or in Size

Report Two – Distribution of European Parliament Seats

Note 1

Please note that most of the processes in **Report Two** are the same as in **Report One**. As I have explained them in detail in Report One, I will not be writing them again in detail.

Note 2

Please note that, the **training data** for **Kaye is Learning SQL** is as of 2009 European Parliament elections. Although they are true to reality for 2009, they are no more current.

The SQL Query

Here is the SQL query I am going to use in my report.

```
SELECT count(m.mep_id) no_of_meps,
ifnull(pgr.pg_code, 'NI') political_group_code,
ifnull(pgr.pg_name, 'Non-Inscrits') political_group_name,
ctr.country_id,
ctr.country_name
FROM `kayeilsql.meps` m
join `kayeilsql.countries` ctr
on (m.country_id = ctr.country_id)
left outer join `kayeilsql.political_groups` pgr
on (m.pg_id = pgr.pg_id)
group by pgr.pg_code,
pgr.pg_name,
ctr.country_id,
ctr.country_name
order by ctr.country_id, political_group_code;
```

This SQL query answers the following question.

Q. How many MEPS (Members of the European Parliament) are there, in a Political Group, in a Country?

Run the query in Google Cloud BigQuery

I go to the console.

<https://console.cloud.google.com/>

Similar to what I have done in Report One, I have to be in my free account.

Here is my project.

The screenshot shows the Google Cloud Explorer interface. At the top, there's a navigation bar with the Google Cloud logo and a dropdown menu labeled "My First Project". Below the navigation bar is the main "Explorer" view. A search bar at the top of the view contains the placeholder "Search BigQuery resources". Underneath the search bar, it says "Viewing resources." and "SHOW STARRED ONLY". A list of projects is shown, with "meta-altar-436208-u2" being the selected project, indicated by a blue selection bar on the left and a pink arrow pointing to the project name. To the right of the project name are a star icon and a more options icon (three dots). The entire screenshot is framed by a thick pink border.

I open an **SQL Query window** and copy my query.

The screenshot shows the Google Cloud SQL Query window. At the top, there's a navigation bar with the Google Cloud logo and a dropdown menu labeled "My First Project". A search bar is also present. The main area is titled "Untitled query" and contains the following SQL code:

```

1 SELECT count(m.mep_id) no_of_meps,
2 ifnull(pgr.pg_code, 'NI') political_group_code,
3 ifnull(pgr.pg_name, 'Non-Inscrits') political_group_name,
4 ctr.country_id,
5 ctr.country_name
6 FROM `kayeilsql.meps` m
7 join `kayeilsql.countries` ctr
8 on (m.country_id = ctr.country_id)
9 left outer join `kayeilsql.political_groups` pgr
10 on (m.pg_id = pgr.pg_id)
11 group by pgr.pg_code,
12 pgr.pg_name,
13 ctr.country_id,
14 ctr.country_name
15 order by ctr.country_id, political_group_code;

```

To the left of the query editor is the "Explorer" sidebar, which lists various resources like Queries, Notebooks, Data canvases, Data preparations, and Workflows. The "meta-altar-436208-u2" project is selected, indicated by a blue selection bar on the left and a pink arrow pointing to the project name. The entire screenshot is framed by a thick pink border.

KayellSQL Google Looker Studio

I run my query.

My query runs successfully.

The screenshot shows a Google Looker Studio interface with a pink border. At the top, there's a toolbar with icons for file, search, and navigation, followed by a tab labeled 'Untitled query' with a 'RUN' button highlighted by a pink arrow. Below the toolbar is a code editor window containing the following SQL query:

```
12 pgr.pg_name,
13 ctr.country_id,
14 ctr.country_name
15 order by ctr.country_id, political_group_code;
```

Below the code editor is a 'Query results' section with a green border. It contains a table with the following data:

Row	no_of_meps	political_group_code	political_group_name	country_id	country_name
1	1	ALDE	Group of the Alliance of Liberal...	AT	Austria
2	6	EPP-ED	Group of the European People's Party(Christian Democrats) and European Democrats	AT	Austria
3	2	Greens/EFA	Group of the Greens/European ...	AT	Austria
4	2	NI	Non-Inscrits	AT	Austria
5	7	PES	Socialist Group in the European...	AT	Austria
6	6	ALDE	Group of the Alliance of Liberal...	BE	Belgium
7	6	EPP-ED	Group of the European People	BE	Belgium

At the bottom of the results section, there are pagination controls: 'Results per page: 50 ▾ 1 – 50 of 126' and navigation arrows.

On the first page, I can see the results for Austria, country_id = AT, because rows are ordered by country_id initially.

I can see that within Austria, the rows are ordered in political_group_code.

This is how I wrote my query.

```
order by ctr.country_id, political_group_code;
```

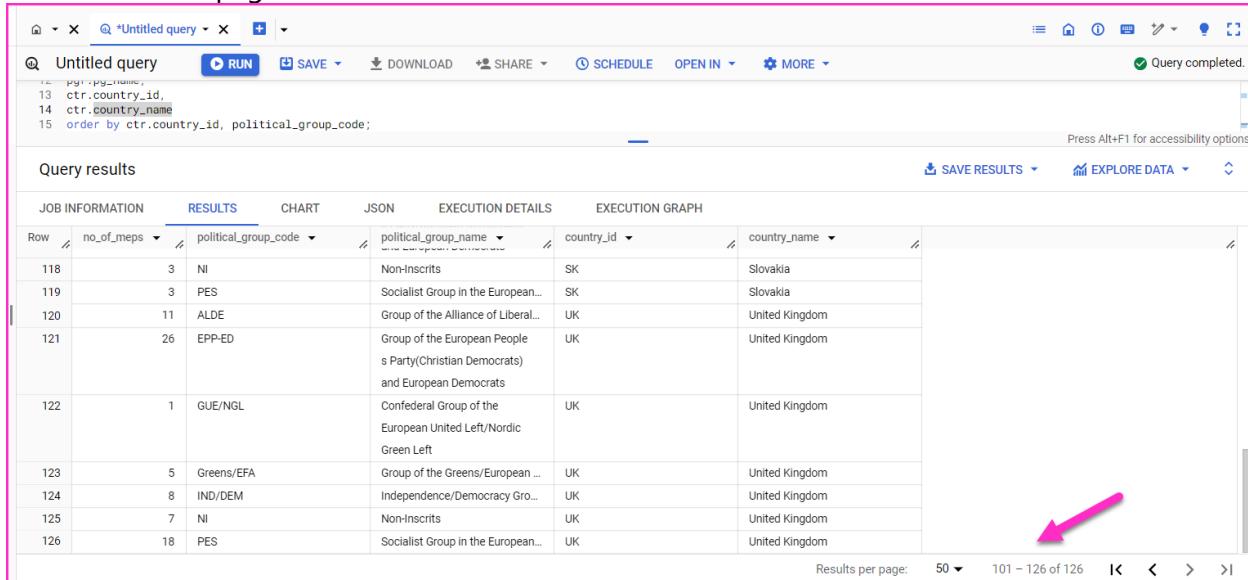
There is a total of 18 Members of the European Parliament in Austria (no_of_meps).

I click on the button to check the last 50 rows.

The screenshot shows a table with two columns: 'BE' and 'Belgium'. In the top right corner of the table area, there is a button labeled 'Last 50 rows' with a pink arrow pointing to it. Below the table are the same pagination controls as the previous screenshot: 'Results per page: 50 ▾ 1 – 50 of 126' and navigation arrows.

KayellSQL Google Looker Studio

I am on the last page now.



The screenshot shows a Google Looker Studio interface with an untitled query. The results table has columns: Row, no_of_meps, political_group_code, political_group_name, country_id, and country_name. The data includes rows for various political groups across different countries, with the last row being the United Kingdom. The bottom right corner of the table area has a pink arrow pointing to it, indicating the last page of the results.

Row	no_of_meps	political_group_code	political_group_name	country_id	country_name
118	3	NI	Non-Inscrits	SK	Slovakia
119	3	PES	Socialist Group in the European...	SK	Slovakia
120	11	ALDE	Group of the Alliance of Liberal...	UK	United Kingdom
121	26	EPP-ED	Group of the European People's Party(Christian Democrats) and European Democrats	UK	United Kingdom
122	1	GUE/NGL	Confederal Group of the European United Left/Nordic Green Left	UK	United Kingdom
123	5	Greens/EFA	Group of the Greens/European ...	UK	United Kingdom
124	8	IND/DEM	Independence/Democracy Gro...	UK	United Kingdom
125	7	NI	Non-Inscrits	UK	United Kingdom
126	18	PES	Socialist Group in the European...	UK	United Kingdom

I can see that in alphabetical order country_id=UK is the last country listed in my query.



The screenshot shows a Google Looker Studio interface with an untitled query. The results table has columns: Row, no_of_meps, political_group_code, political_group_name, country_id, and country_name. The data includes rows for various political groups across different countries, with the last row being the United Kingdom. The bottom right corner of the table area has a pink arrow pointing to it, indicating the last page of the results.

Row	no_of_meps	political_group_code	political_group_name	country_id	country_name
120	11	ALDE	Group of the Alliance of Liberal...	UK	United Kingdom
121	26	EPP-ED	Group of the European People's Party(Christian Democrats) and European Democrats	UK	United Kingdom
122	1	GUE/NGL	Confederal Group of the European United Left/Nordic Green Left	UK	United Kingdom
123	5	Greens/EFA	Group of the Greens/European ...	UK	United Kingdom
124	8	IND/DEM	Independence/Democracy Gro...	UK	United Kingdom
125	7	NI	Non-Inscrits	UK	United Kingdom
126	18	PES	Socialist Group in the European...	UK	United Kingdom

There is a total of 76 Members of the European Parliament from UK.

Please note that the database data is as of 2009 elections.

Save the Query

I save my query under my project, under Classic Queries.

The screenshot shows the Google Looker Studio interface. At the top, there's a navigation bar with icons for home, refresh, and search, followed by the title '*Untitled query'. Below the title is a toolbar with a 'RUN' button and a 'SAVE' button. A dropdown menu is open over the 'SAVE' button, listing four options: 'Save query', 'Save query (classic)', 'Save view', and 'Save as...'. The 'Save query (classic)' option is highlighted with a pink arrow. The main area contains a block of SQL code:

```

1 SELECT count(m.mep_id) no_of_me
2 ifnull(pgr.pg_code, 'NI') polit
3 ifnull(pgr.pg_name, 'Non-Inscri
4 ctr.country_id,
5 ctr.country_name
6 FROM `kayeilsq...` m
7 join `kayeilsq...` ctr
8 on (m.country_id = ctr.country_
9 left outer join `kayeilsq...` poli
10 on (m.pg_id = pgr.pg_id)
11 group by pgr.pg_code,
12 pgr.pg_name,
13 ctr.country_id,
14 ctr.country_name
15 order by ctr.country_id, political_group_code;

```

The screenshot shows a 'Save query' dialog box. It starts with a informational message: 'Saved queries store query text and dialect settings only. Once a query has been saved, all other settings are reset to defaults.' Below this, there are two input fields: 'Name *' containing 'lookerStudio_Report_Two.sql' and 'Visibility' set to 'personal (editable only by you)'. At the bottom right, there are two buttons: 'SAVE' and 'CANCEL', with a pink arrow pointing to the 'SAVE' button.

KayeilSQL Google Looker Studio

Here is my query for my second report, saved under my project.

The screenshot shows the Google Cloud Explorer interface. At the top, it displays "Google Cloud" and "My First Project". The main area is titled "Explorer" with a search bar "Search BigQuery resources". Below the search bar, it says "Viewing resources." and "SHOW STARRED ONLY". A list of resources is shown, including:

- meta-altar-436208-u2 (highlighted with a pink arrow)
- Queries
 - (Classic) Queries (6)
 - Project queries
 - information_schema.sql
 - kayeysql_week_02.sql
 - kayeysql_week_03.sql
 - kayeysql_week_04.sql
 - lookerStudio_Report_One.sql
 - lookerStudio_Report_Two.sql (highlighted with a pink arrow)
- Notebooks

BigQuery to Looker Studio

It is now time to create my report in Looker Studio.
I use the query results in Looker Studio as follows.

One. In the **Query Results** section of the query, I click on **EXPLORE DATA**.

The screenshot shows a Google BigQuery query results page. A pink box highlights the 'Query results' section and the 'EXPLORE DATA' button. The table displays data from three tables: countries, political_groups, and political_group_memberships. The columns are: Row, no_of_meps, political_group_code, political_group_name, country_id, and country_name. The data includes rows for ALDE, EPP-ED, and GUE/NGL political groups, and their corresponding countries (UK).

Row	no_of_meps	political_group_code	political_group_name	country_id	country_name
120	11	ALDE	Group of the Alliance of Liberal...	UK	United Kingdom
121	26	EPP-ED	Group of the European People's Party(Christian Democrats) and European Democrats	UK	United Kingdom
122	1	GUE/NGL	Confederal Group of the European United Left/Nordic Green Left	UK	United Kingdom

Two. In the panel that opens, I click on **Explore with Looker Studio**.

The screenshot shows the 'Explore with Looker Studio' panel. A pink box highlights the 'Explore with Looker Studio' option. The panel also lists 'Explore with Sheets' (with a note about visualising big data in a spreadsheet tool), 'Explore with Python notebook' (with a note about exploring and visualising with Python), and 'Explore with data canvas' (with a note about exploring and visualising with data canvas). The bottom of the panel shows standard pagination controls.

Google Cloud BigQuery takes me to a new screen: **The Looker Studio Reporting Screen**.

The Looker Studio Reporting Screen

This is the **Looker Studio Reporting** screen.

Looker has already created a report using my query results.

The screenshot shows the Looker Studio reporting interface. At the top, there's a navigation bar with tabs like 'File', 'Editing', 'View', 'Insert', 'Page', 'Arrange', 'Resource', and 'Help'. On the right side, there are buttons for 'Save and share' and 'Pause updates'. The main area features a title 'BigQuery Custom SQL' and a bar chart titled 'no_of_meps' showing data for various countries. Below the chart is a table with the same data. The right sidebar contains a 'Data' panel with fields like 'country_id', 'country_name', 'no_of_meps', 'political_group_code', 'political_group_name', and 'Record Count'. There are also buttons for 'Add a field', 'Add a parameter', and 'Add Data'.

political_group_code	no_of_meps
EPP-ED	288
PES	216
ALDE	100
UEN	46
Greens/EFA	44
GUE/NGL	41
NI	30
IND/DEM	22

On the top right of the screen, I can see that, I have the same user as in Google Cloud BigQuery, And this is exactly what I want.

The screenshot shows a browser window with a toolbar at the top. A yellow box highlights the 'Save and share' button, and a pink arrow points to the text 'Google Account: Dicle (deucloud89@gmail.com)' which is displayed next to the user icon.

Rename the Report

I will initially rename my report.

This is the current report name.

A screenshot of a web browser window titled "Looker Studio reporting - 07/10/2024, 09:18". The title bar shows the URL "lookerstudio.google.com/u/1/reporting/create?c.mode=edit&c.source=BQ_UI&ds.type". The main content area displays the report title "Looker Studio reporting - 07/10/2024, 09:18". A yellow box highlights the title. Below the title is a toolbar with various icons for file operations, data addition, chart creation, and filters.

I type over and change the name.

A screenshot of the Looker Studio interface showing the report title "Distri" with a red arrow pointing to the "i" character, indicating it is selected for editing. The rest of the interface remains the same as the previous screenshot.

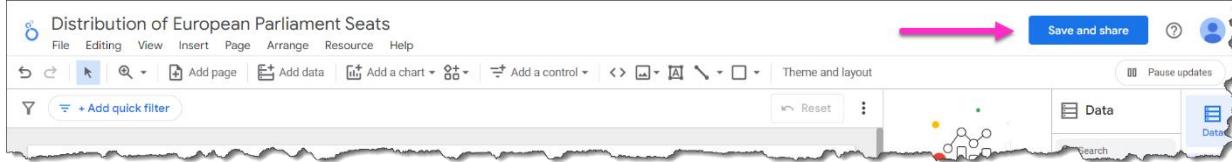
A screenshot of the Looker Studio interface showing the report title has been changed to "Distribution of European Parliament Seats". The rest of the interface remains the same as the previous screenshots.

KayellSQL Google Looker Studio

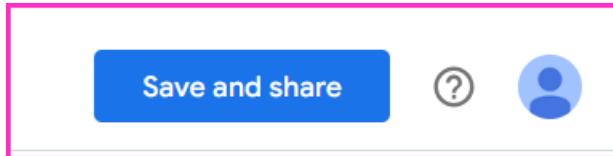
Save the Report

I will now SAVE my Looker Studio Report.

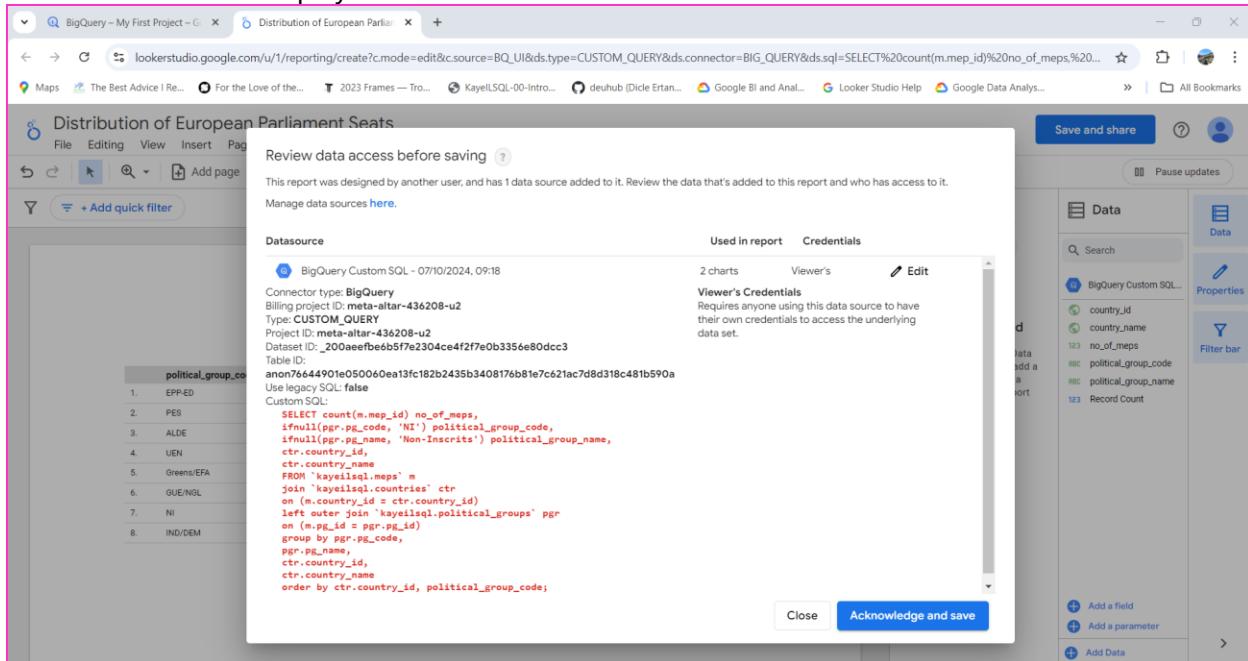
Save and share button is on the top right-hand-side.



I click on the **Save and share** button.



A modal window is displayed.



KayeilSQL Google Looker Studio

Review data access before saving [?](#)

This report was designed by another user, and has 1 data source added to it. Review the data that's added to this report and who has access to it.

Manage data sources [here](#).

Datasource	Used in report	Credentials
<p>BigQuery Custom SQL - 07/10/2024, 09:18</p> <p>Connector type: BigQuery</p> <p>Billing project ID: meta-altar-436208-u2</p> <p>Type: CUSTOM_QUERY</p> <p>Project ID: meta-altar-436208-u2</p> <p>Dataset ID: _200aeeefbe6b5f7e2304ce4f2f7e0b3356e80dcc3</p> <p>Table ID: anon76644901e050060ea13fc182b2435b3408176b81e7c621ac7d8d318c481b590a</p> <p>Use legacy SQL: false</p> <p>Custom SQL:</p> <pre>SELECT count(m.mep_id) no_of_meps, ifnull(pgr.pg_code, 'NI') political_group_code, ifnull(pgr.pg_name, 'Non-Inscrits') political_group_name, ctr.country_id, ctr.country_name FROM `kayeilsql.meps` m join `kayeilsql.countries` ctr on (m.country_id = ctr.country_id) left outer join `kayeilsql.political_groups` pgr on (m.pg_id = pgr.pg_id) group by pgr.pg_code, pgr.pg_name, ctr.country_id, ctr.country_name order by ctr.country_id, political_group_code;</pre>	2 charts	Viewer's Edit
		Viewer's Credentials Requires anyone using this data source to have their own credentials to access the underlying data set.

[Close](#) [Acknowledge and save](#)

My report is now saved.

[BigQuery - My First Project](#) [Distribution of European Parliament Seats](#)

lookerstudio.google.com/u/1/reporting/2a665248-f1e1-4275-856c-c6180b2068fe/page/tEnnC/edit

Maps The Best Advice I Re... For the Love of the... 2023 Frames — Tro... KayeilSQL-00-Intro... deuhub (Dicle Ertan... Google BI and Anal... Looker Studio Help Google Data Analy...

Distribution of European Parliament Seats

File Editing View Insert Page Arrange Resource Help

Add page Add data Add a chart Add a control ... Add a quick filter

BigQuery Custom SQL

political_group_code	no_of_meps
EPP-ED	288
PES	216
ALDE	100
IEN	46
Greens/EFA	44
GUE/NGL	41
NI	30
IND/DEM	22

Let's get started

Drag a field from the Data Panel to the canvas to add a new chart or select a component on the report canvas to edit it.

Data Panel

- BigQuery Custom SQL
- country_id
- country_name
- no_of_meps
- political_group_code
- political_group_name
- Record Count

Properties

Filter bar

Add a field Add a parameter Add Data

Where is my Report?

My report is in the following address.

<https://lookerstudio.google.com/>

The screenshot shows the Looker Studio web interface. At the top, there are three tabs: 'Recent' (selected), 'Reports' (highlighted in blue), 'Data sources', and 'Explorer'. On the right side, there is a user profile icon with a pink arrow pointing to it. Below the tabs, there's a 'Recent' section with filters for 'Shared with me', 'Owned by me', and 'Bin'. To the right of this is a 'Template Gallery' section displaying four template cards: 'Blank Report Looker Studio', 'GA4 Report Google Analytics', 'Acme Marketing Google Analytics', and 'Search Console Report Search Console'. Below these sections is a table listing recent reports:

Name	Owned by anyone	Last opened by me	Location
Distribution of European Parliament Seats	Dicle	11:14	Owned by me
Countries by Join Year	Dicle	4 Oct 2024	Owned by me

A pink arrow points to the first report in the list.

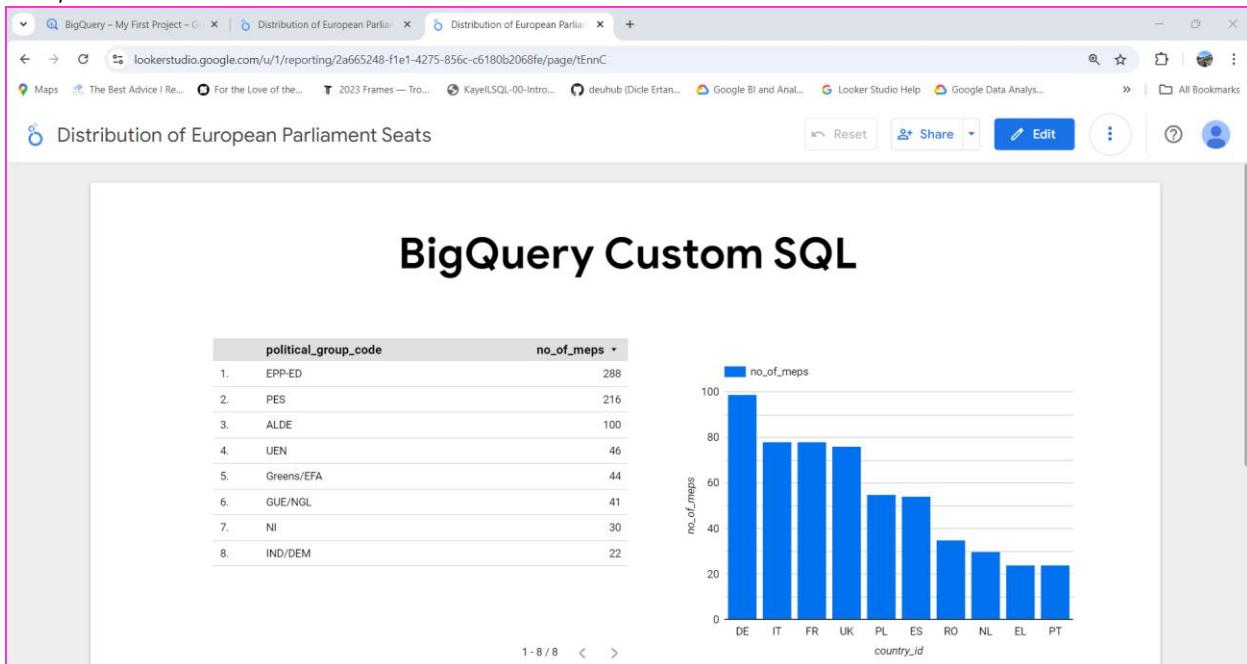
To access my report, I simply click on the name.

This is a zoomed-in view of the same table from the previous screenshot, showing the two recent reports:

Name	Owned by anyone	Last opened by me	Location
Distribution of European Parliament Seats	Dicle	11:14	Owned by me
Countries by Join Year	Dicle	4 Oct 2024	Owned by me

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And, here I am.

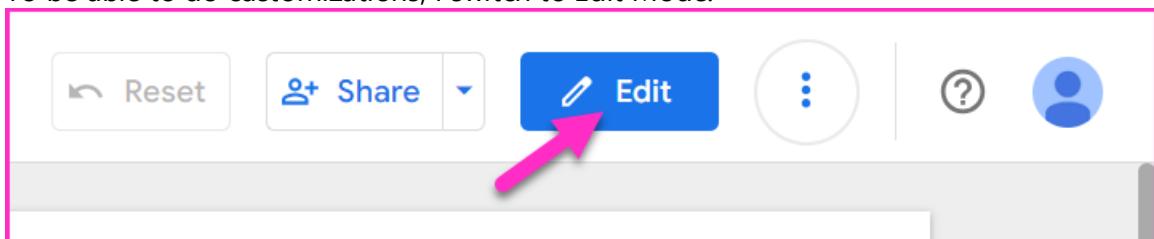


Customize the Report

I will now customize my report.

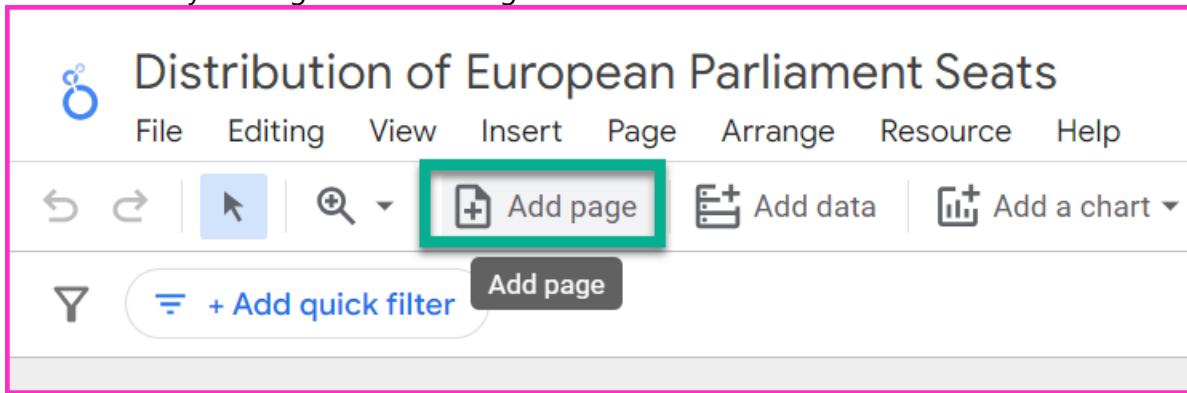
- ➊ I will add a New Page
- ➋ I will Rename the Report Pages
- ➌ I will add two charts to the second page of my report:
 - ➍ Chart One. Pivot Table with Heatmap
 - ➎ Chart Two. Google Bubble Map

To be able to do customizations, I switch to Edit Mode.

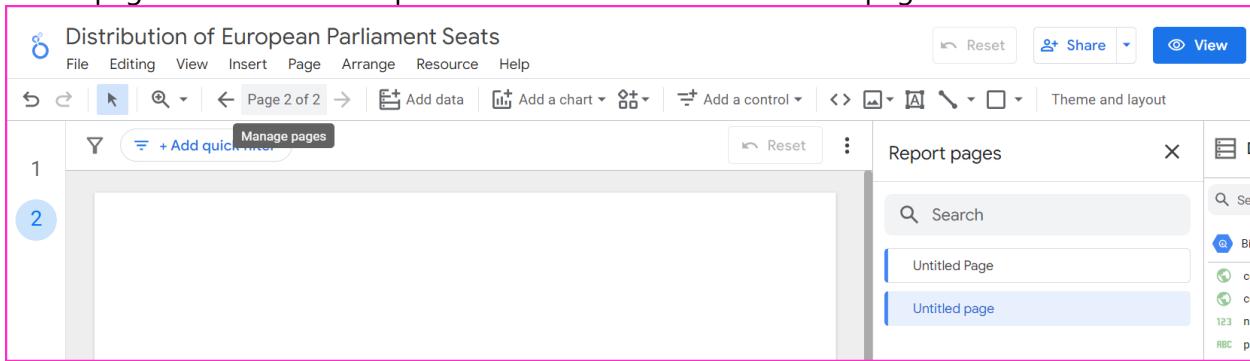


Add a New Page

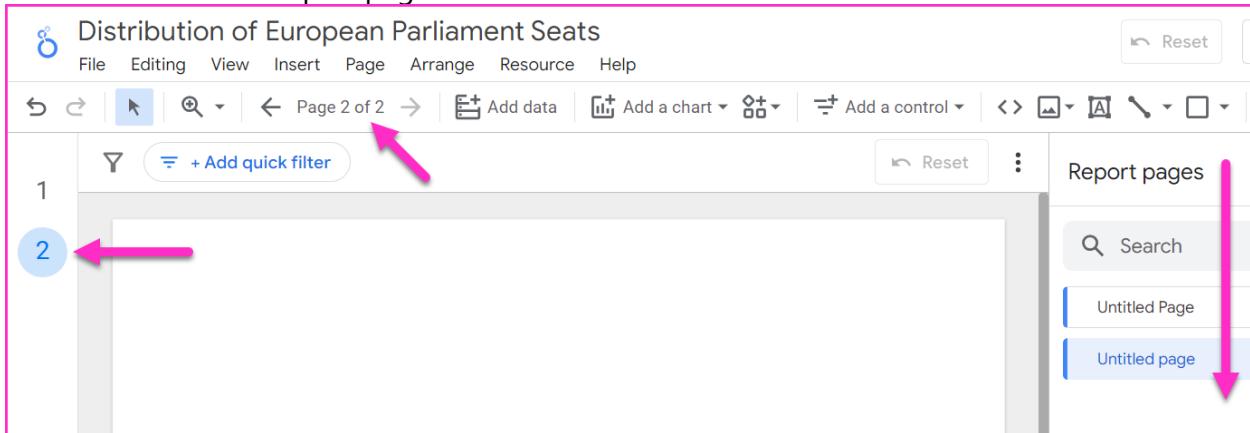
I will add a New Page to my report.
I can do this by clicking on the Add Page button.



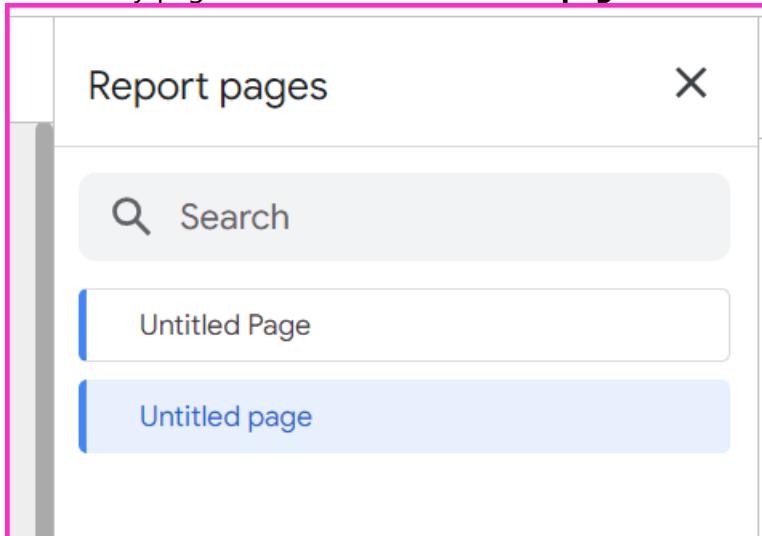
A new page is added to the report as soon as I clicked on the Add page button.



I now have a second report page.

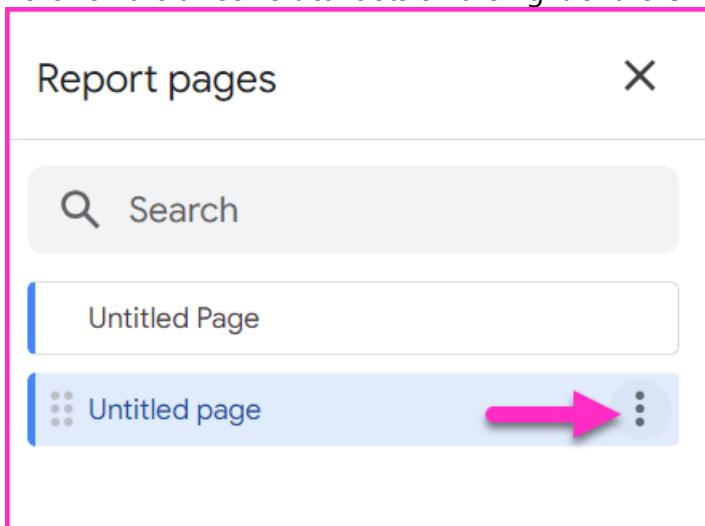


Both of my pages have the name **Untitled page**.



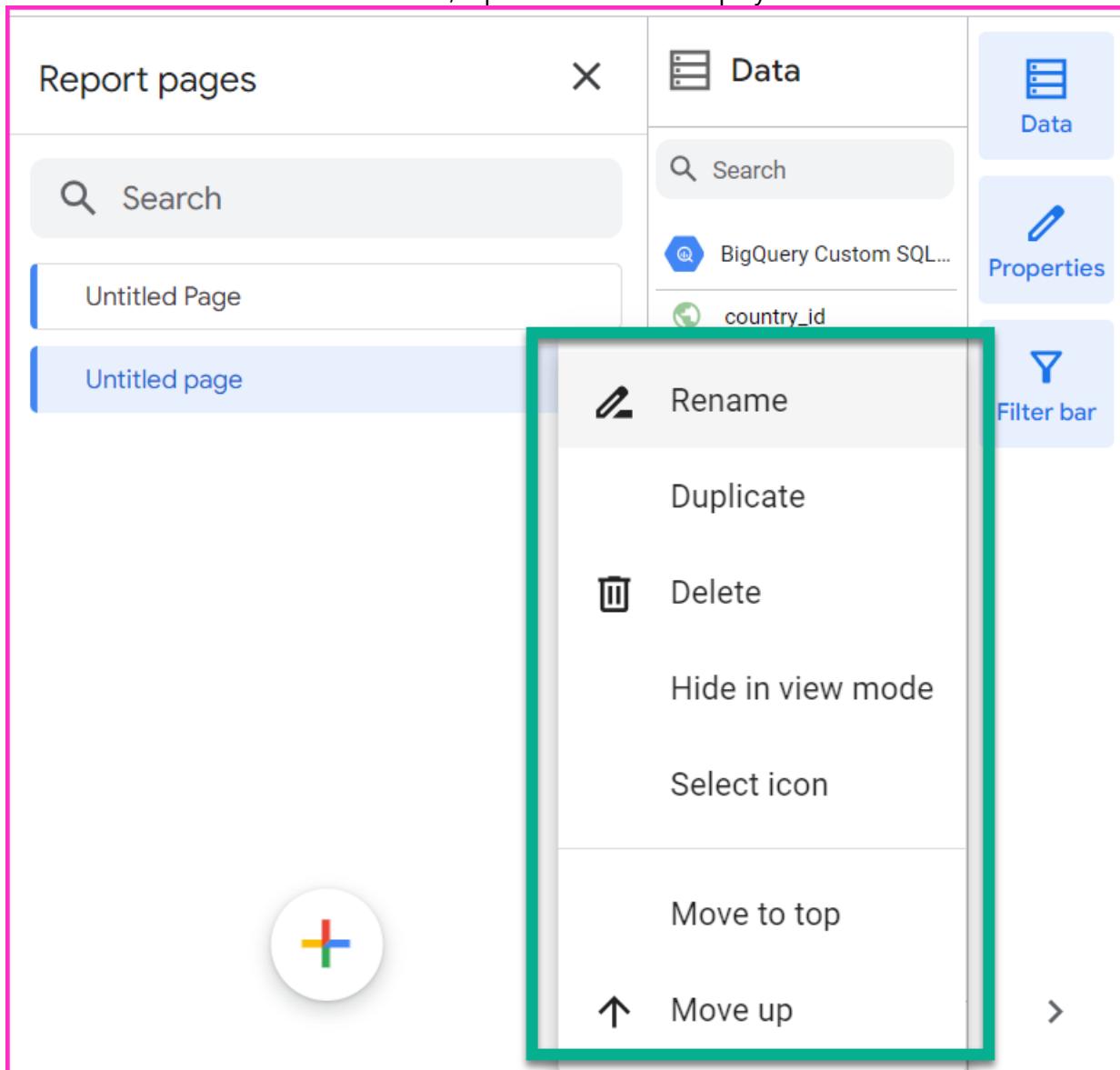
Rename the Report Pages

Now that I have two report pages, I want to give each one a name. I click on the three vertical dots on the right of the **Untitled page**.

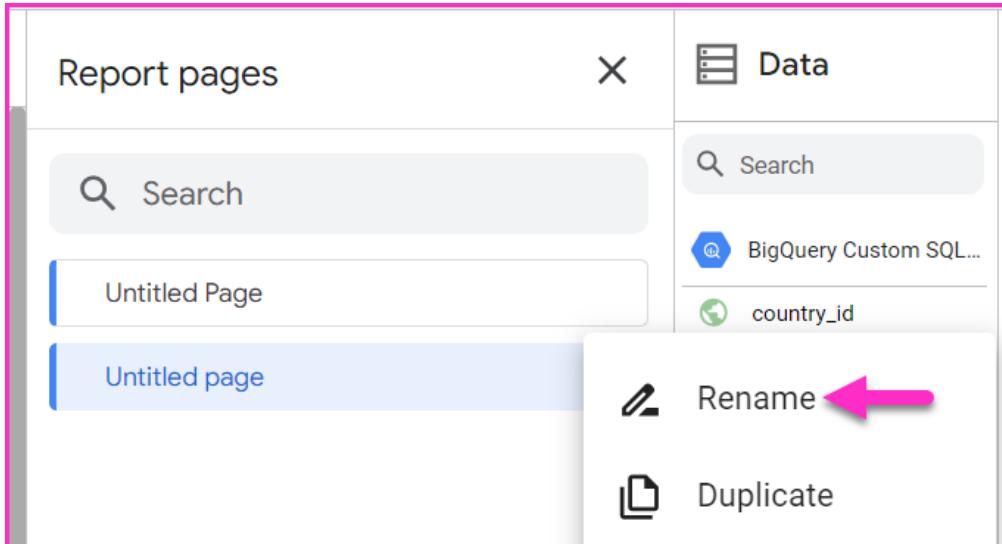


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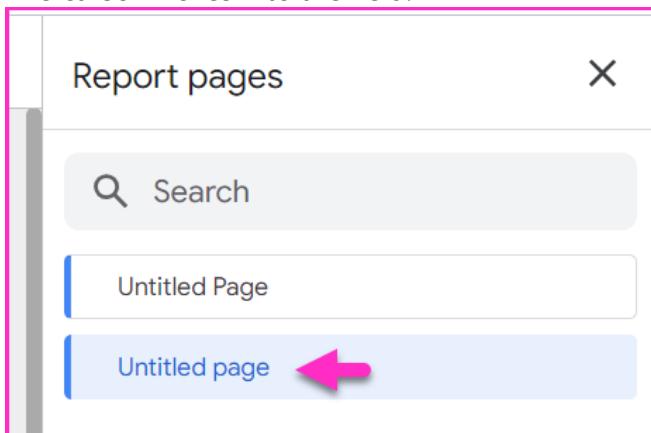
When I click on the three vertical dots, a pan-out menu is displayed.



I select **Rename**.

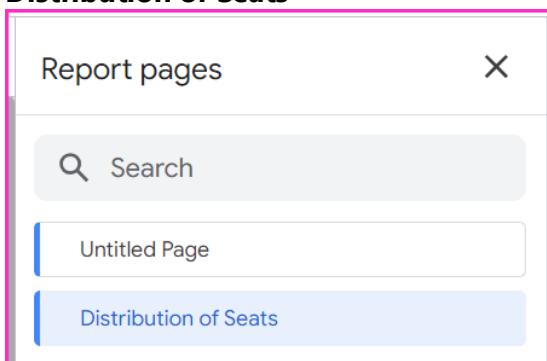


The cursor moves into the field.



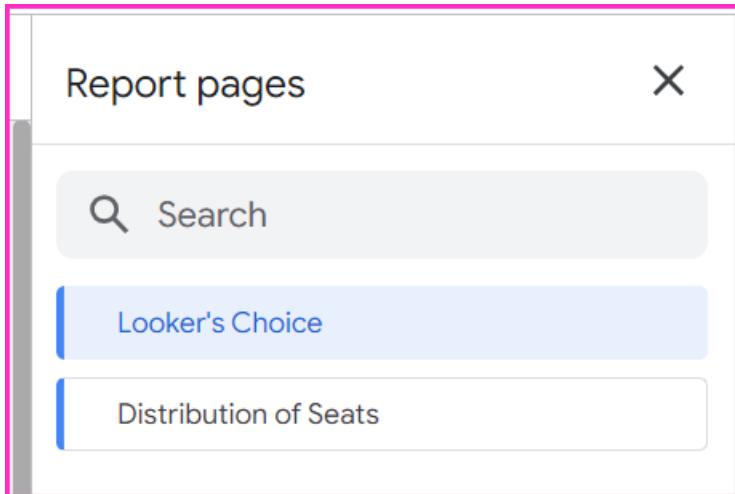
I type in the new name.

Distribution of Seats

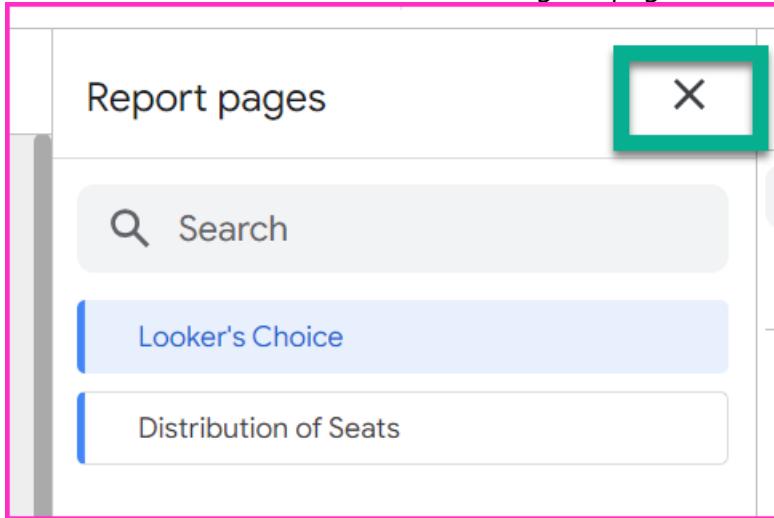


Likewise, I rename the first page.

Looker's Choice



I then click on X, and finish with Renaming the pages.



Page Names in Edit Mode

In **Edit Mode**, I hover over the page numbers on the left hand side, and I can see the new page names are displayed.

Distribution of European Parliament Seats

File Editing View Insert Page Arrange Resource Help

← → Page 1 of 2 Add data Add a chart Add a control

1 Manage pages + Add quick filter

2 BigQuery Custom SQL

This screenshot shows the Google Looker Studio interface in Edit Mode. The top navigation bar includes File, Editing, View, Insert, Page, Arrange, Resource, and Help. Below the navigation is a toolbar with icons for back, forward, search, and page navigation. A sidebar on the left displays two pages: page 1 is titled "BigQuery Custom SQL" and page 2 is titled "Looker's Choice". A "Manage pages" button is located above the pages. A "Reset" button is at the top right of the page area. On the far right, there are various icons for data sources and sharing.

Distribution of Europe

File Editing View Insert F

← → Page 1

1 + Add quick filter

Looker's Choice Big

This screenshot shows the Google Looker Studio interface in Edit Mode. The top navigation bar includes File, Editing, View, Insert, and F. Below the navigation is a toolbar with icons for back, forward, search, and page navigation. A sidebar on the left displays two pages: page 1 is titled "Big" and page 2 is titled "Looker's Choice". A "Manage pages" button is located above the pages. A "Reset" button is at the top right of the page area. On the far right, there are various icons for data sources and sharing.

Distribution of Euro

File Editing View Insert

← → Page 1

1 + Add quick filt

2

Distribution of Seats

political_group_code
1. EPP-ED
2. S&D
3. ALDE
4. Greens-EFA
5. PPE
6. Other

This screenshot shows the Google Looker Studio interface in Edit Mode. The top navigation bar includes File, Editing, View, Insert, and F. Below the navigation is a toolbar with icons for back, forward, search, and page navigation. A sidebar on the left displays two pages: page 1 is titled "Distribution of Seats" and page 2 shows a table of political group codes. The table has one column labeled "political_group_code" with rows 1 through 6. A "Manage pages" button is located above the pages. A "Reset" button is at the top right of the page area. On the far right, there are various icons for data sources and sharing.

Page Names in View Mode

I switch to the View Mode.

In View Mode, I can see that the full page names are displayed.

The screenshot shows a Looker Studio report interface. At the top, there's a title bar with the report name 'Distribution of European Parliament Seats' and standard navigation buttons for 'Reset', 'Share', 'Edit', and more. Below the title bar, there's a sidebar with a blue header labeled 'Looker's Choice' containing the text 'Distribution of Seats'. The main content area features a large, bold title 'BigQuery Custom SQL' centered on the page. The overall layout is clean and professional, typical of a data visualization tool.

I am done with renaming the report pages.



Add a Chart to the Second Page: Pivot Table with Heatmap

In Edit Mode, I click on 2, and go to the second page.

Distribution of European Parliament Seats

File Editing View Insert Page Arrange Resource Help

← → | + Add quick filter | ← Page 1 of 2 → | Add data | Add a chart ▾

1

2

BigQuery Custom SQL

Distribution of Seats

political_group_code no_of_meps

1. EPP-ED 288 no_of_meps

This page is yet empty.

Distribution of European Parliament Seats

File Editing View Insert Page Arrange Resource Help

← → | Add data | Add a chart ▾ | Add a control ▾ | Theme and layout | Pause updates

1

2

+ Add quick filter

Reset Share View

Let's get started

Drag a field from the Data Panel to the canvas to add a new chart or select a component on the report canvas to edit it.

Data

Search

- BigQuery Custom SQL
- country_id
- country_name
- no_of_meps
- political_group_code
- political_group_name
- Record Count

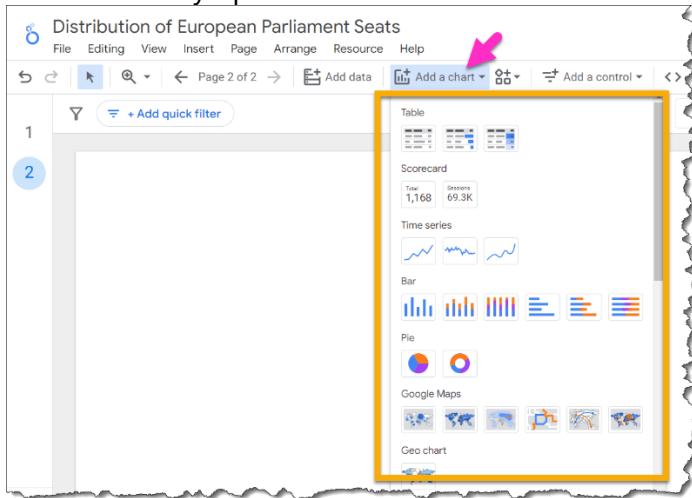
Data Properties Filter bar

KayellSQL Google Looker Studio

I click on **Add a chart**.

A drop-down menu is displayed.

There are many options of charts for me to select from.



I scroll-down.

I select **Pivot table with heatmap**.



Default “Pivot Table with Heatmap” by Looker

Looker draws a **Pivot Table with Heatmap** for me as seen below.

Distribution of European Parliament Seats

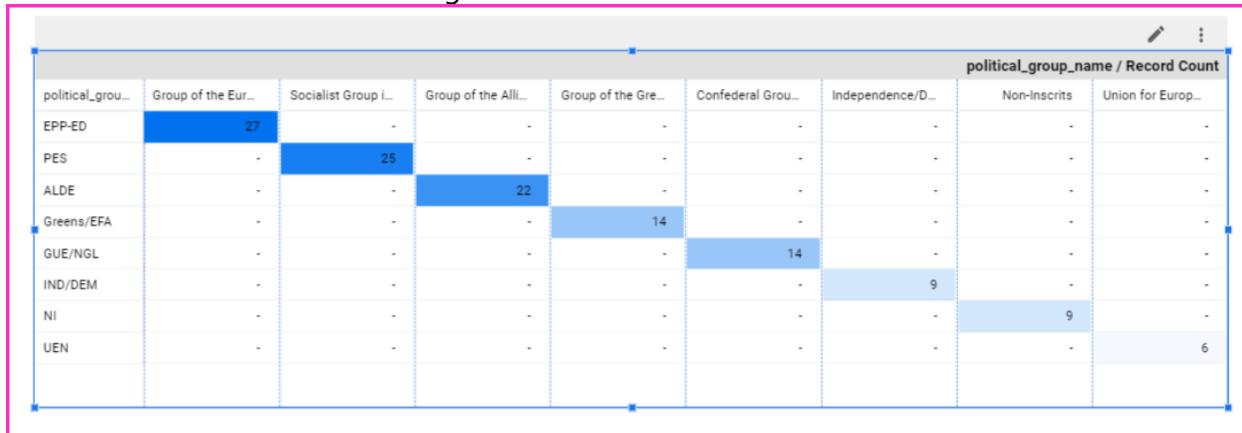
File Editing View Insert Page Arrange Resource Help

Reset Share View Theme and layout Pause updates

Chart Data Properties Filter bar

political_group_name	Group of the Eur...	Socialist Group i...	Group of the Alli...	Group of the Gre...	Confederal Grou...	Independence/D...	Non-Inscrits	Union for Europ...
EPP-ED	27	-	-	-	-	-	-	-
PES	-	25	-	-	-	-	-	-
ALDE	-	-	22	-	-	-	-	-
Greens/EFA	-	-	-	14	-	-	-	-
GUE/NGL	-	-	-	-	14	-	-	-
IND/DEM	-	-	-	-	-	9	-	-
NI	-	-	-	-	-	-	9	-
UEN	-	-	-	-	-	-	-	6

Here is the **Default Chart** Looker gave me.



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Data / Query Columns

Looker Data Columns

In **Looker**, the Query columns are seen on the right-hand-side under **Data**.

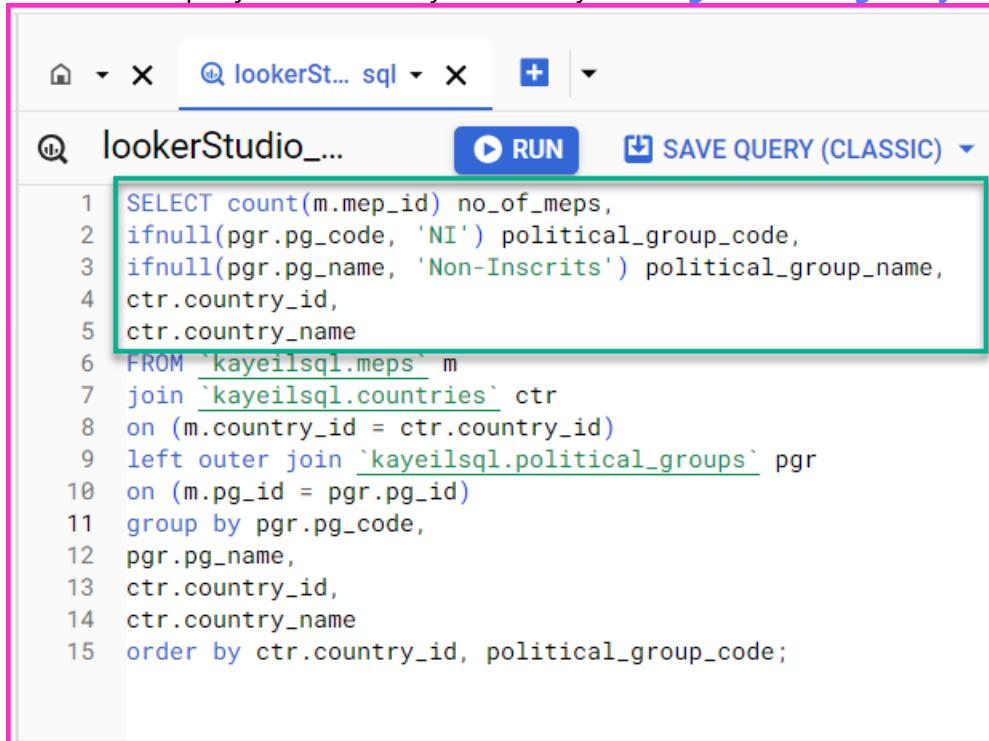
The screenshot shows the Google Looker Studio interface. On the left, there is a chart titled "Distribution of European Parliament Seats" showing political group distribution across various groups. On the right, the "Data" panel is open, displaying the query configuration. The "Data source" section shows a BigQuery Custom SQL query from 07/10/2024. The "Row dimension" is set to "political_group_code" and the "Column dimension" is set to "political_group_name". The "Data" panel also lists several fields: "country_id", "country_name", "no_of_meps" (which is highlighted with a yellow box), "political_group_code", "political_group_name", and "Record Count".

Looker Data Columns

This screenshot shows the "Data" panel in Looker. It includes a search bar, a query summary for "BigQuery Custom SQL - 07/10/2024, 09:18", and a list of columns. The columns listed are: "country_id", "country_name", "no_of_meps" (highlighted with a green box), "political_group_code", "political_group_name", and "Record Count".

BigQuery SQL Query Columns

Here are the query columns in my SQL Query in [Google Cloud BigQuery](#).



The screenshot shows a Looker Studio query editor window. The title bar says "lookerStudio_...". Below it, there's a toolbar with a magnifying glass icon, a "RUN" button, and a "SAVE QUERY (CLASSIC)" dropdown. The main area contains a SQL query:

```
1 SELECT count(m.mep_id) no_of_meps,
2 ifnull(pgr.pg_code, 'NI') political_group_code,
3 ifnull(pgr.pg_name, 'Non-Inscrits') political_group_name,
4 ctr.country_id,
5 ctr.country_name
6 FROM `kayeilsql.meps` m
7 join `kayeilsql.countries` ctr
8 on (m.country_id = ctr.country_id)
9 left outer join `kayeilsql.political_groups` pgr
10 on (m.pg_id = pgr.pg_id)
11 group by pgr.pg_code,
12 pgr.pg_name,
13 ctr.country_id,
14 ctr.country_name
15 order by ctr.country_id, political_group_code;
```

BigQuery SQL Query Columns = Looker Data Columns

My [BigQuery SQL Query columns](#), are the same as [Looker Data Columns](#).

Looker only added the **metric Record Count**.



The screenshot shows a Looker Data Column configuration. On the left, there's a sidebar with a "BigQuery Custom SQL - 07/10/2024, 09:18" entry. Below it is a list of columns:

- country_id
- country_name
- no_of_meps
- political_group_code
- political_group_name

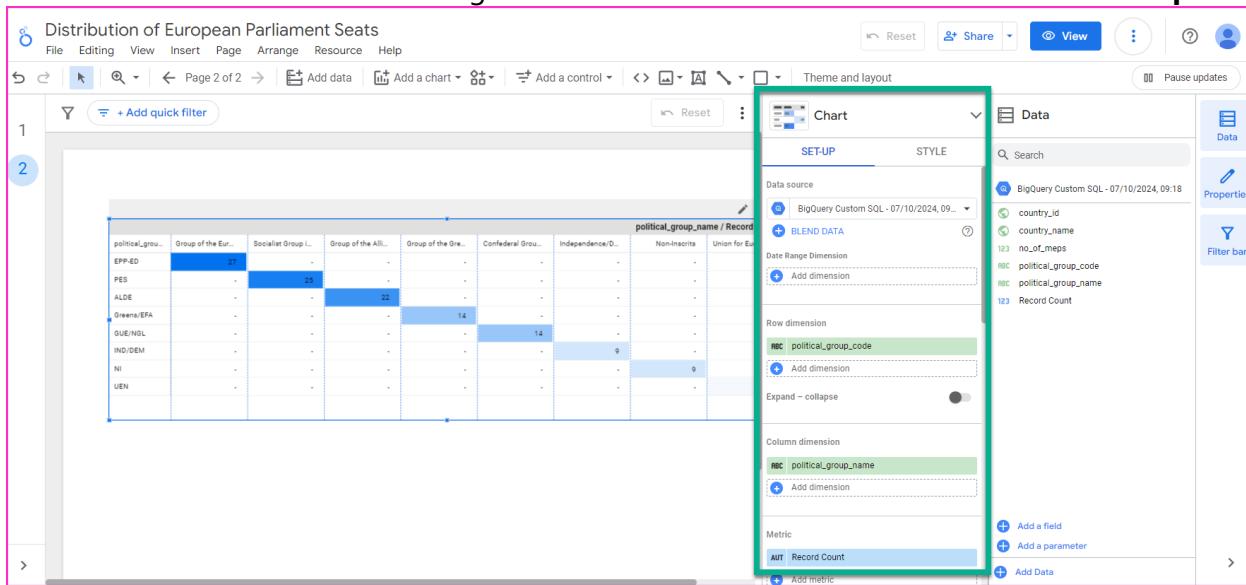
Next to each column name is a small icon: a globe for country_id, a map for country_name, a blue square for no_of_meps, a red square for political_group_code, and a green square for political_group_name.

On the right, there's a large text box containing the SQL query:

```
SELECT count(m.mep_id) no_of_meps,
ifnull(pgr.pg_code, 'NI') political_group_code,
ifnull(pgr.pg_name, 'Non-Inscrits') political_group_name,
ctr.country_id,
ctr.country_name
```

Default SET-UP By Looker

Here is the Default SET-UP Looker gave me for this chart – the Pivot Table with Heatmap.



Let's have a closer look at the Looker Defaults.

The screenshot shows the 'SET-UP' tab selected in the Looker Studio chart configuration interface. The interface is divided into several sections:

- Data source:** Set to "BigQuery Custom SQL - 07/10/2024, 09..." with a dropdown arrow.
- Date Range Dimension:** A dashed box containing a blue plus icon and the text "Add dimension".
- Row dimension:** A green box labeled "ABC political_group_code" with a blue plus icon and "Add dimension".
- Column dimension:** A green box labeled "ABC political_group_name" with a blue plus icon and "Add dimension".
- Metric:** A blue box labeled "AUT Record Count" with a blue plus icon and "Add metric".

Row Dimension

Looker chose **political_group_code** as the **Row Dimension**.

Column Dimension

Looker chose **political_group_name** as the **Column Dimension**.

Metric

Looker chose **Record Count** as the **Metric**.

However, I will now change some of them.

Row Dimension

I will keep the Row Dimension as is.

political_group_code will be my **Row Dimension**.

Column Dimension

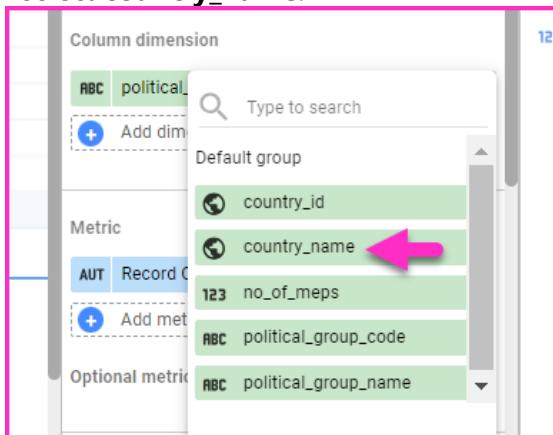
I will change the Column Dimension to be **country_name**.

To change the Column Dimension, I click on the existing field.



Several Data Fields are displayed.

I select **country_name**.



As I changed my Column Dimension, my chart is updated as follows.

Columns are now Country Names.

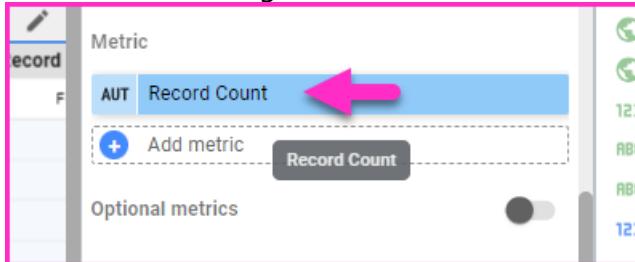
political_group_code	Italy	France	Denmark	United King...	Ireland	Netherlands	Poland	Sweden	Austria
EPP-ED	1	1	1	1	1	1	1	1	1
PES	1	1	1	1	1	1	1	1	1
ALDE	1	1	1	1	1	1	1	1	1
Greens/EFA	1	1	1	1	-	1	-	1	1
GUE/NGL	1	1	1	1	1	1	-	1	-
IND/DEM	-	1	1	1	1	1	1	1	1
NI	1	1	-	1	-	1	1	-	1
UEN	1	-	1	-	1	-	1	-	-

KayellSQL Google Looker Studio

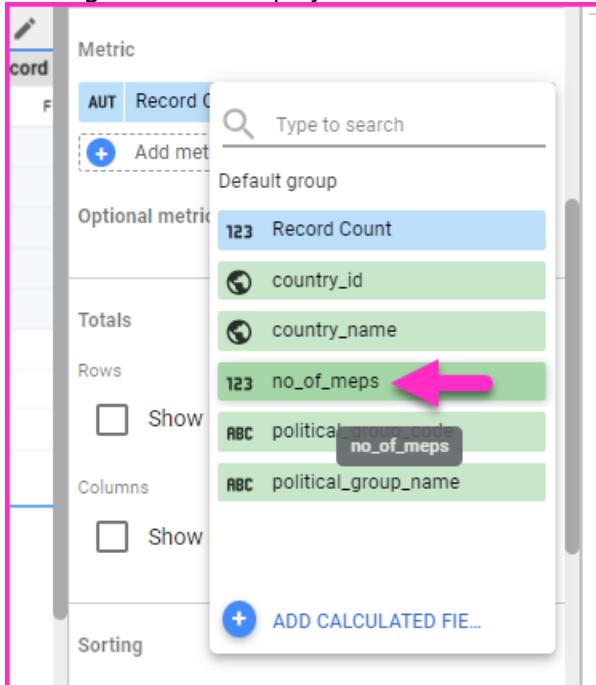
Metric

I will now change the Metric to be the **no_of_meps**.

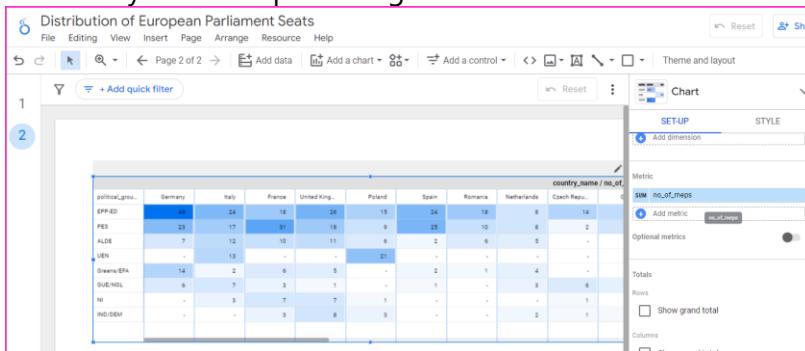
I click on the existing Metric field.



Among the fields displayed, I select **no_of_meps**.



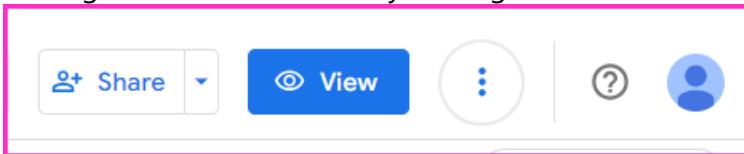
Here is my Chart is updated again.



The New Chart with the New Dimension and the New Metric

I will now **View my Customizations**.

I change to the **View Mode** by clicking on the **View** button.



Here is my new chart with my new dimensions and new metric.

Distribution of European Parliament Seats

political_grou...	Germany	Italy	France	United King...	Poland	Spain	Romania	Netherlands	Czech Repu...	Greece
	49	24	18	26	15	24	18	8	14	11
PES	23	17	31	18	9	25	10	8	2	8
ALDE	7	12	10	11	6	2	6	5	-	-
UEN	-	13	-	-	21	-	-	-	-	-
Greens/EFA	14	2	6	5	-	2	1	4	-	-
GUE/NGL	6	7	3	1	-	1	-	3	6	4
NI	-	3	7	7	1	-	-	-	1	-
IND/DEM	-	-	3	8	3	-	-	2	1	1

I scroll to the right to view the rest of the countries.

political_grou...	King...	Poland	Spain	Romania	Netherlands	Czech Repu...	Greece	Portugal	Hungary	Belgium	E
	26	15	24	18	8	14	11	9	13	6	
PES	18	9	25	10	8	2	8	12	8	6	
ALDE	11	6	2	6	5	-	-	-	2	6	
UEN	-	21	-	-	-	-	-	-	-	-	
Greens/EFA	5	-	2	1	4	-	-	-	-	2	
GUE/NGL	1	-	1	-	3	6	4	3	-	-	
NI	7	1	-	-	-	1	-	-	-	3	
IND/DEM	8	3	-	-	2	1	1	-	-	-	

KayellSQL Google Looker Studio

political_group	Finland	Lithuania	Slovakia	Ireland	Latvia	Slovenia	Cyprus	Luxembourg	Estonia	Malta	country_name / no_of_meps
EPP-ED	4	2	8	5	3	4	3	3	1	2	
PES	3	2	3	1	-	1	-	1	3	3	
ALDE	5	7	-	1	1	2	1	1	2	-	
UEN	-	3	-	4	4	-	-	-	-	-	
Greens/EFA	1	-	-	-	2	-	-	1	-	-	
GUE/NGL	1	-	-	1	-	-	2	-	-	-	
NI	-	-	3	-	-	-	-	-	-	-	
IND/DEM	-	-	-	1	-	-	-	-	-	-	

This is my Pivot Table with Heatmap so far.

Next, I will change the report theme, as I have done in Report One.

Change the Report Theme

I explained how to change the report theme in detail in Report One.

Hence, I will not explain it here once more.

I will be uploading the same image from my laptop.

I go through the same steps as in Report One, to change the report theme.

Here is the last step.

I select the dark theme.

I click on Apply.

KayeILSQL Google Looker Studio

The look of my report changed immediately as seen below.

Distribution of European Parliament Seats

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+ Add quick filter

political_group	Finland	Lithuania	Slovakia	Ireland	Latvia	Slovenia	Cyprus	Luxembourg	Estonia	Malta
EPP-ED	4	2	8	5	3	4	3	3	1	2
PES	3	2	3	1	-	1	-	1	3	3
ALDE	5	7	-	1	1	2	1	1	2	-
UEN	-	3	-	4	4	-	-	-	-	-
Greens/EFA	1	-	-	-	2	-	-	1	-	-
GUE/NGL	1	-	-	1	-	-	2	-	-	-
NI	-	-	3	-	-	-	-	-	-	-
IND/DEM	-	-	-	-	1	-	-	-	-	-

Change the Style of the Heatmap

I will now change/customize the Style of my Heatmap Chart.

First, I click on my chart.

Then, I click on STYLE.

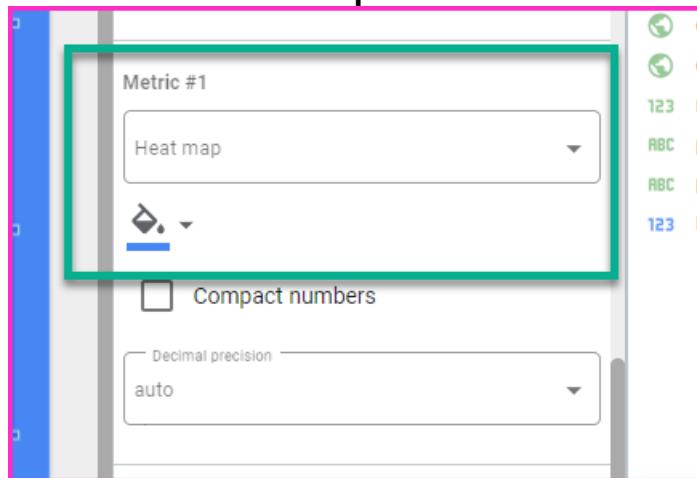
The screenshot shows a heatmap chart titled "country_name / no_of_meps". The chart displays data for various political groups across different countries. The style tab is highlighted with a pink box and labeled '2'. A pink arrow labeled '1' points to the chart area.

political_group_code	Finland	Lithuania	Slovakia	Ireland	Latvia	Slovenia	Cyprus	Luxembourg	Estonia	Malta
EPP-ED	4	2	8	5	3	4	3	3	1	2
PES	3	2	3	1	-	1	-	1	3	3
ALDE	5	7	-	1	1	2	1	1	2	-
UEN	-	3	-	4	4	-	-	-	-	-
Greens/EFA	1	-	-	-	2	-	-	1	-	-
GUE/NGL	1	-	-	1	-	-	2	-	-	-
NI	-	-	3	-	-	-	-	-	-	-
IND/DEM	-	-	-	1	-	-	-	-	-	-

In **STYLE**, I scroll down to find **Metric #1 Heat map**.

The screenshot shows the "STYLE" tab in the chart configuration. It includes sections for "Chart title", "Conditional formatting", and "Table Header". A pink arrow points downwards, indicating the direction to scroll to find the "Metric #1 Heat map" section.

Here is **Metric #1 Heat map**.



Change the Color of Heatmap Cells

The **Paintbox** of the Heat map which is Metric #1 is chosen **Blue**.

We can see it in our chart.

The Heat Map Cells are all Blue.

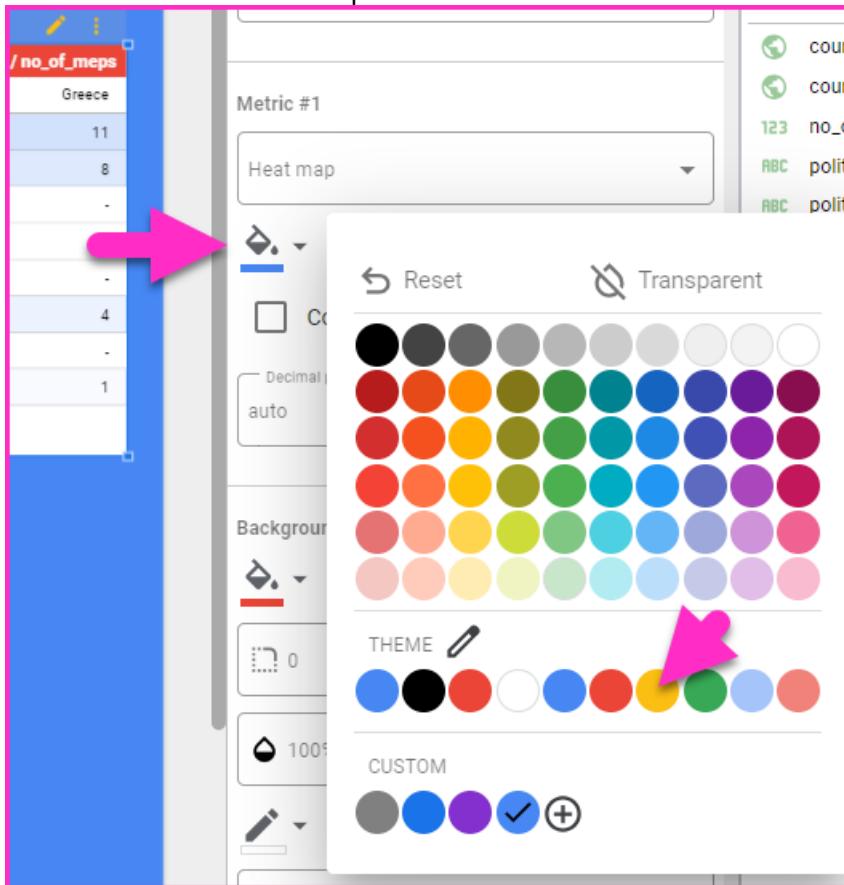
The density of the blue color changes according to the Number of Members of Parliament in a Political Group, In a Country.

political_grou...	Germany	Italy	France	United King...	Poland	Spain
EPP-ED	49	24	18	26	15	24
PES	23	17	31	18	9	25
ALDE	7	12	10	11	6	2
UEN	-	13	-	-	21	-
Greens/EFA	14	2	6	5	-	2
GUE/NGL	6	7	3	1	-	1
NI	-	3	7	7	1	-
IND/DEM	-	-	3	8	3	-

I will now change the cells to another color.

I click on the Paintbox.

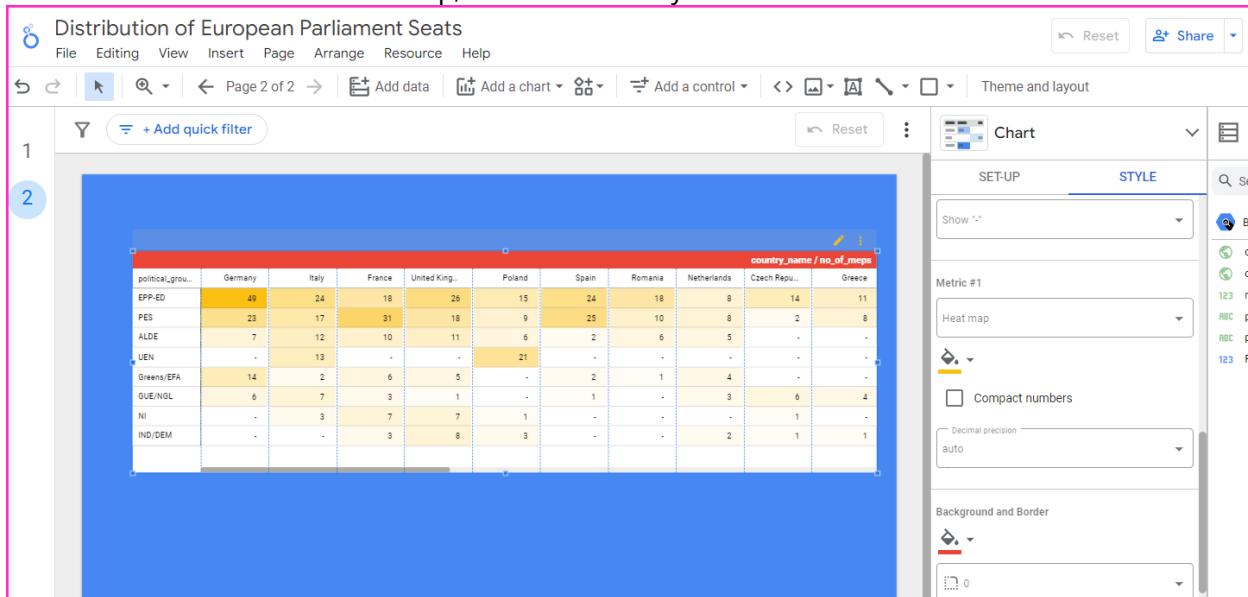
I select Yellow in the color palette.



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My Chart changed immediately.

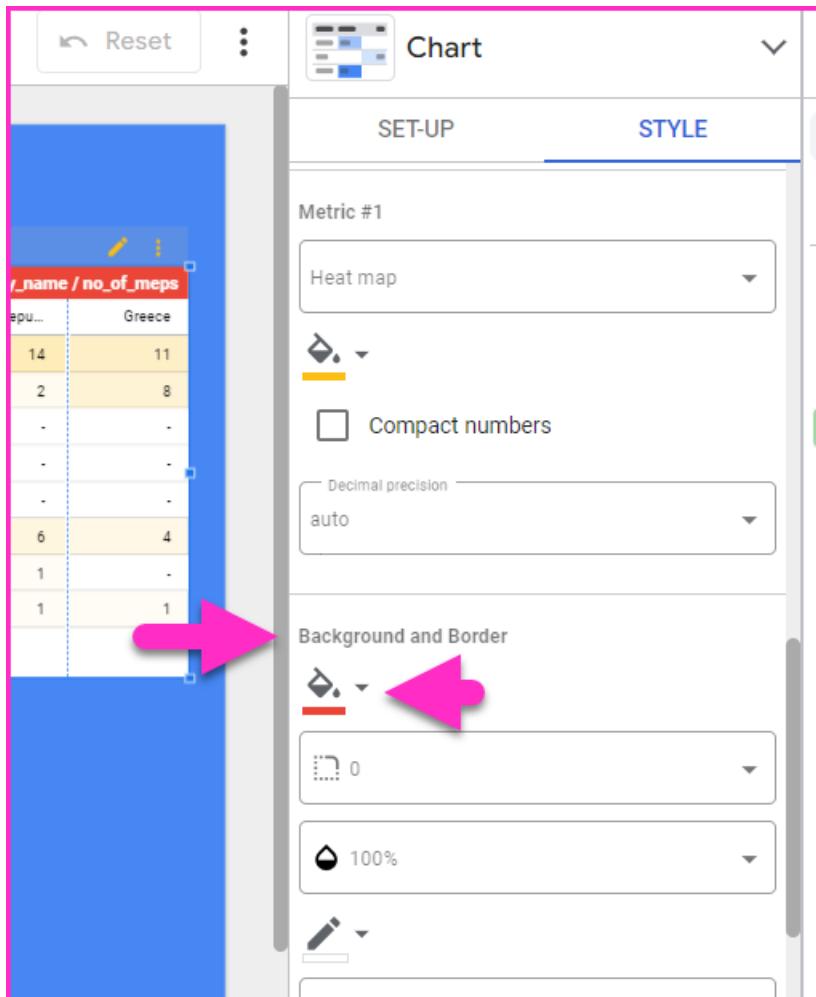
Heat Map colors are now shades of Yellow, depending on the Number of the Members of the Parliament for each Political Group, for each Country.



Change the Color of Heatmap Background

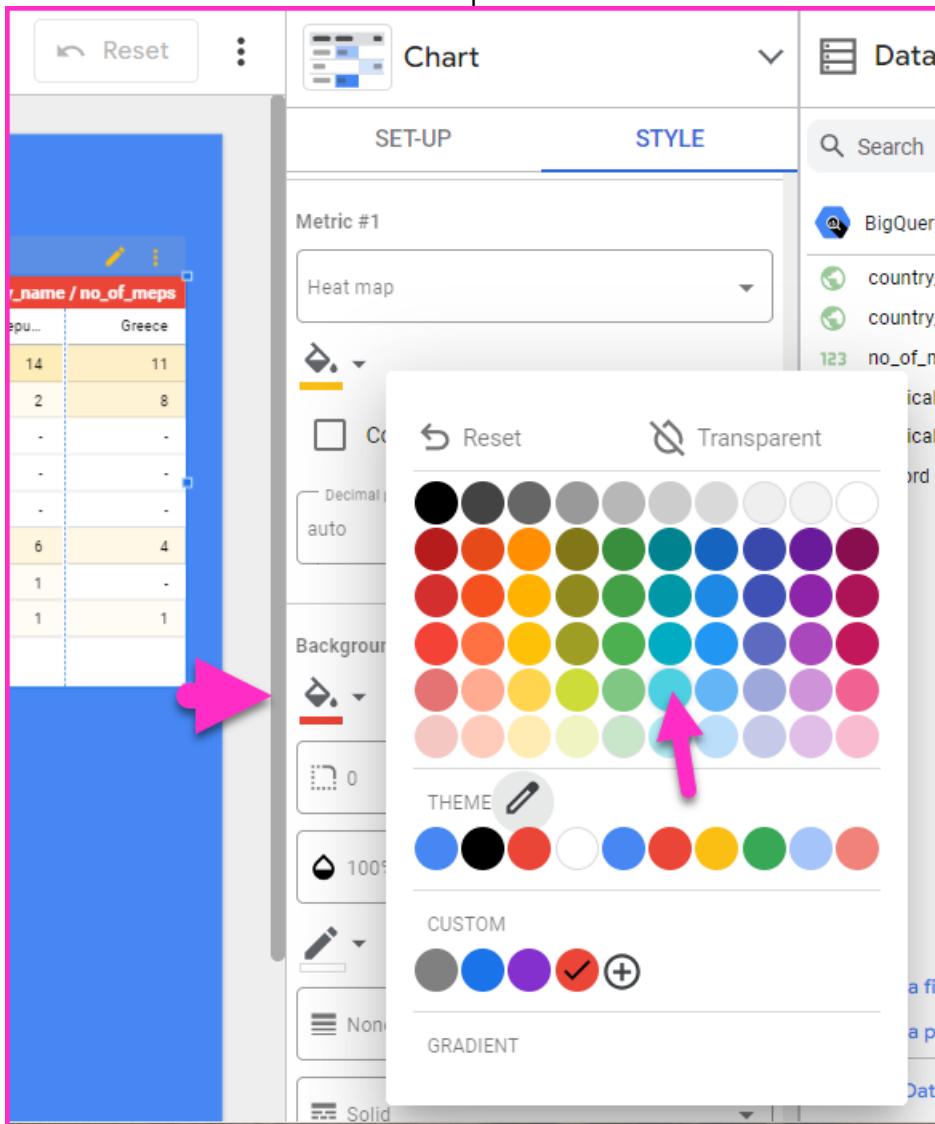
I will now change the **Background and Border**.

I click on the Paintbox.



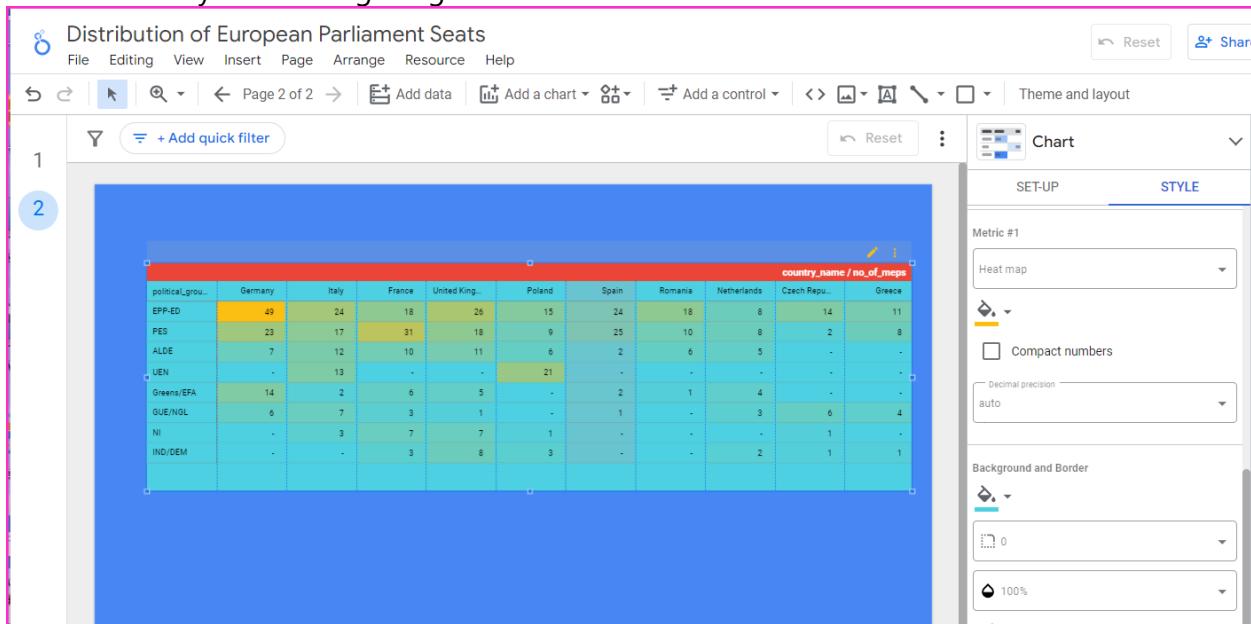
KayellSQL Google Looker Studio

This is what I select from the colour palette.

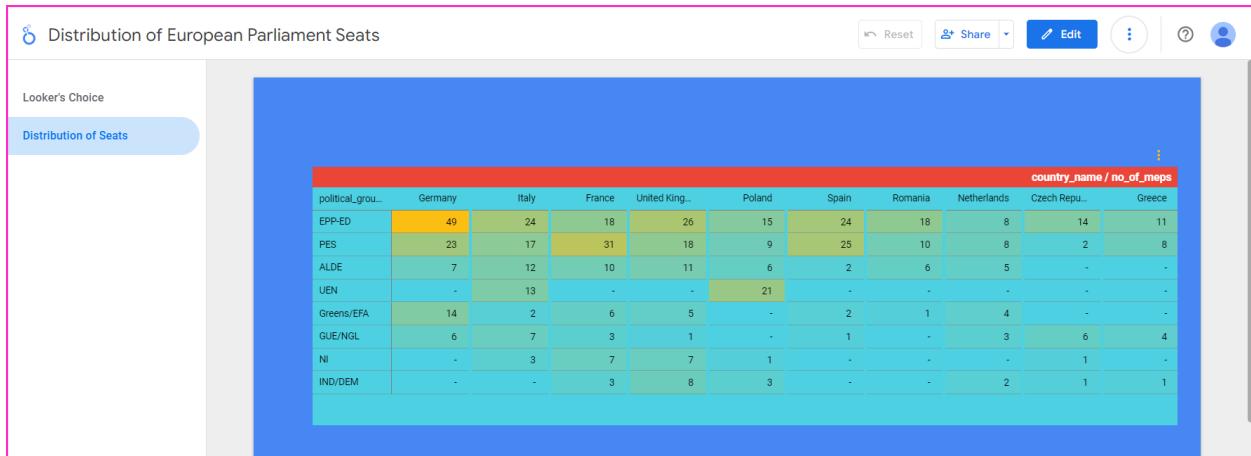


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The looks of my chart changed again.



Let me View in View Mode.



So far, I am satisfied with my Heatmap.

Add Another Chart: Google Maps / Bubble

I will now add another chart to the second page.

The Initial Bubble Map

I click on Add a Chart.

I select **Bubble map** under **Google Maps**.

Distribution of European Parliament Seats

File Editing View Insert Page Arrange Resource Help

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1

2

+ Add quick filter

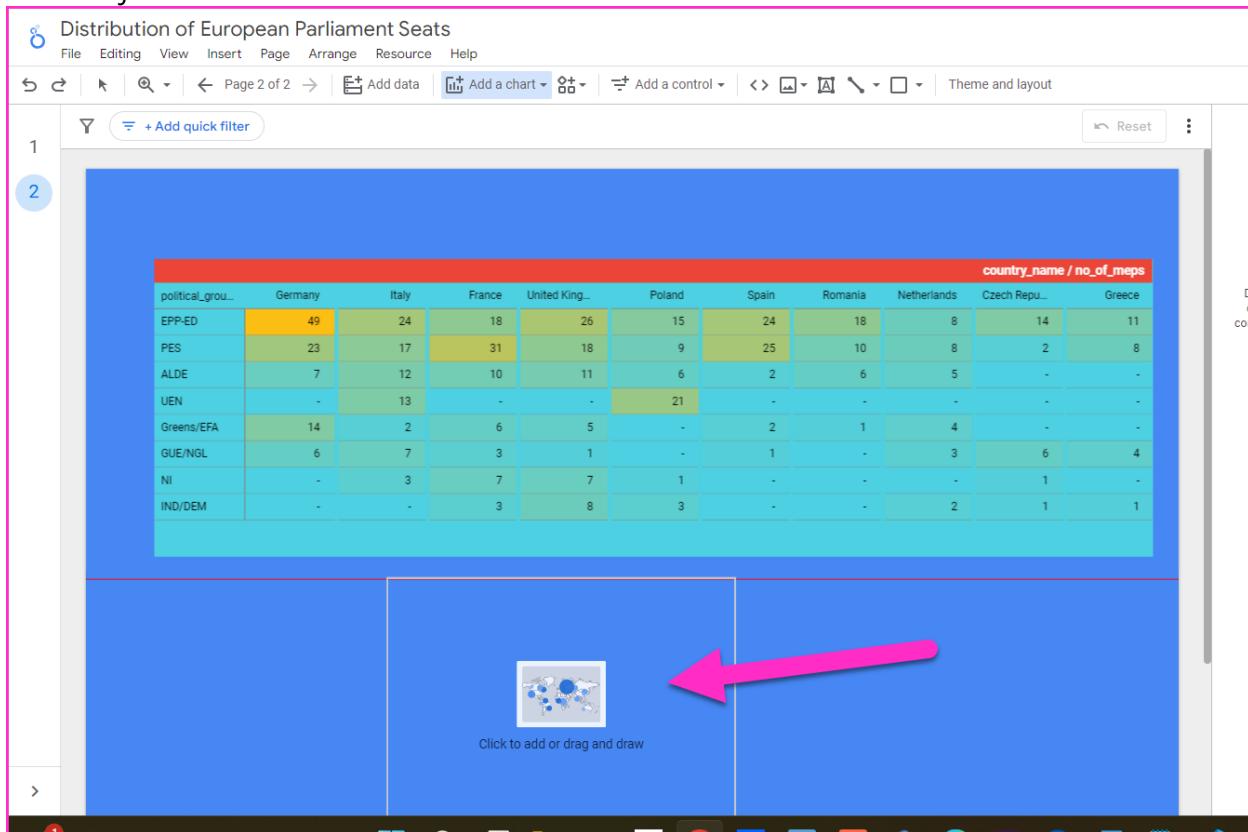
political_grou...	Germany	Italy
EPP-ED	49	24
PES	23	17
ALDE	7	12
UEN	-	13
Greens/EFA	14	2
GUE/NGL	6	7
NI	-	3
IND/DEM	-	-

Table Scorecard Time series Bar Pie Google Maps Line

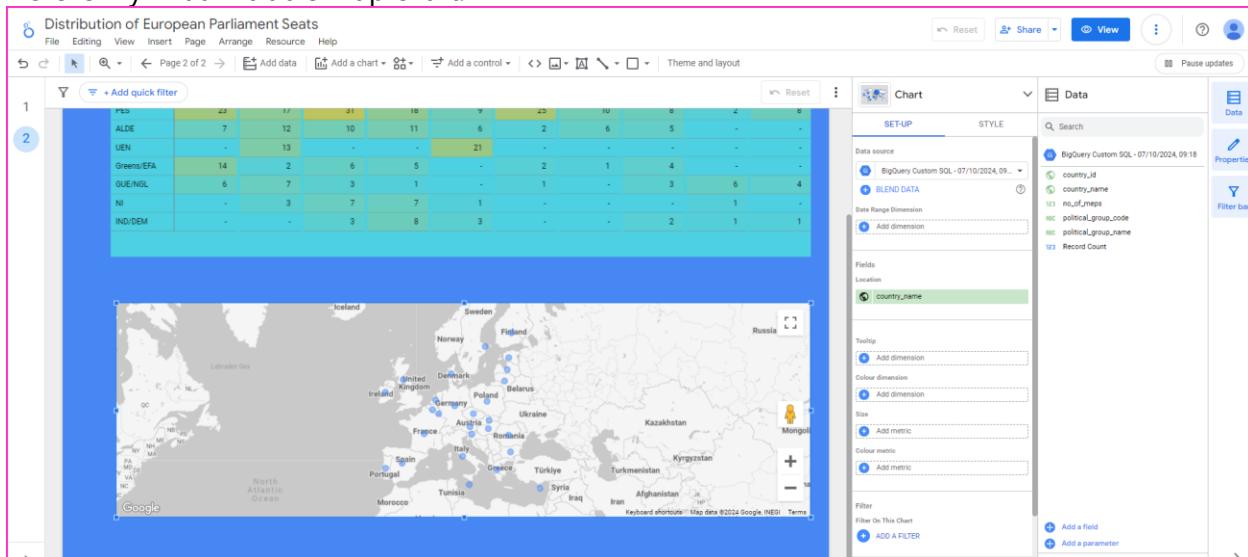
Bubble map

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I move the chart given to me by **Looker** to the place I want.
I then adjust it.



Here is my initial Bubble Map chart.



Default SET-UP

Here is the **Default SET-UP** by Looker.

Only the Location is filled in.

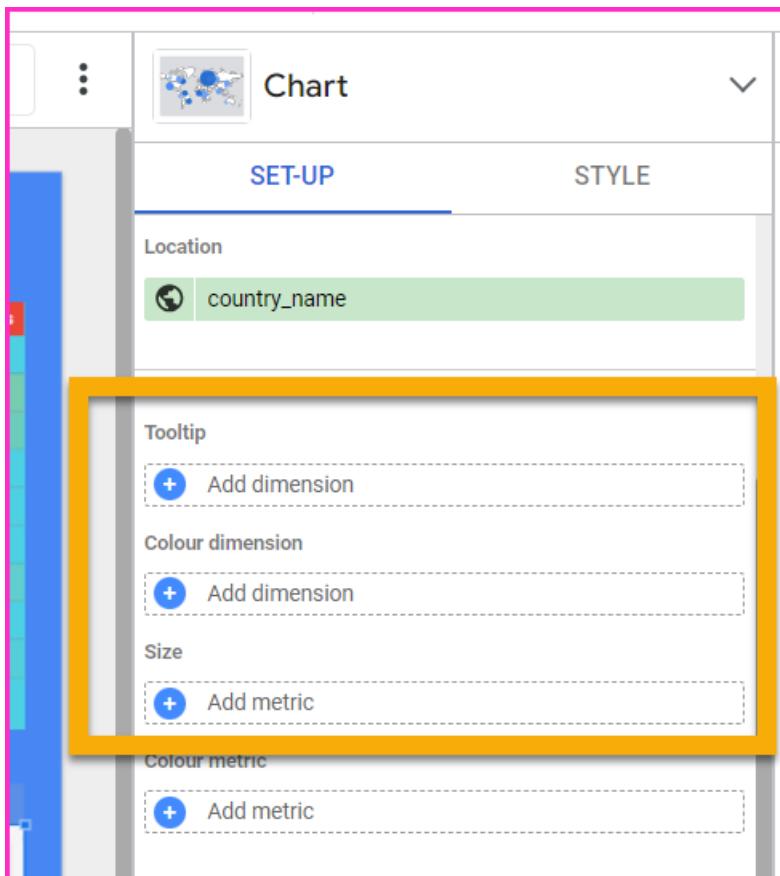
It is set to **country_name**.

The screenshot shows the 'SET-UP' tab in the Looker Studio configuration interface. The 'Fields' section is highlighted with a pink border. Inside this section, the 'Location' field is listed, and below it, the 'country_name' field is selected, indicated by a green background and a pink arrow pointing to it. A second pink arrow points to the 'Location' field. To the right of the 'Fields' section, there is a sidebar with various icons and a list of dimensions and metrics.

I will leave the Default Value for the **Location** as the **country_name**.

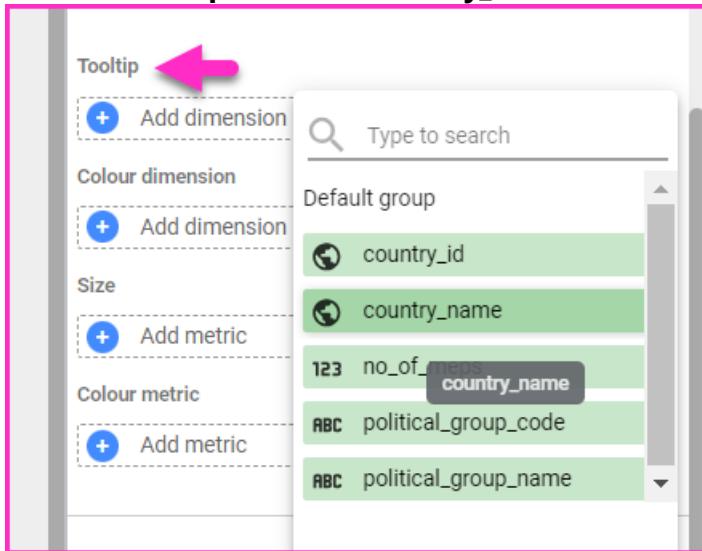
However, I will fill in the following.

- Tooltip
- Color dimension
- Size

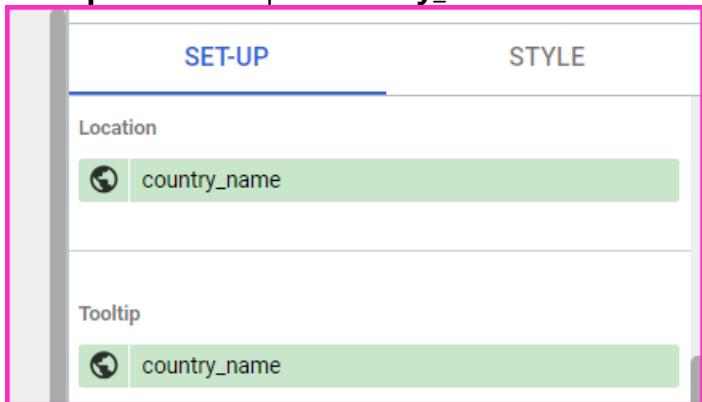


Tooltip = country_name

I click on **Tooltip** and select **country_name**.

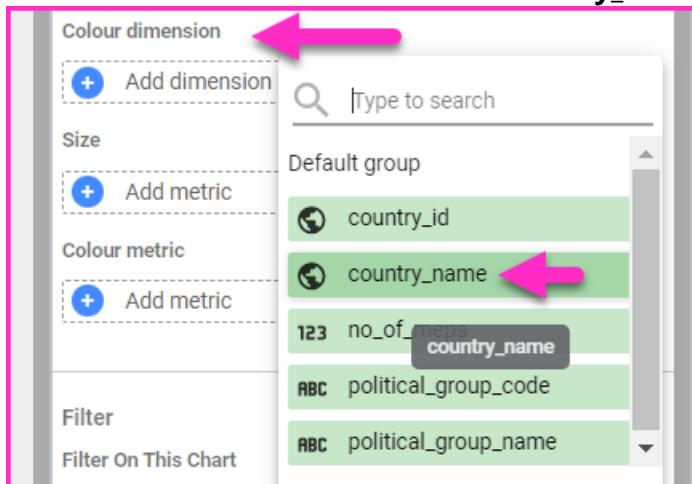


Tooltip is now set up as **country_name**.

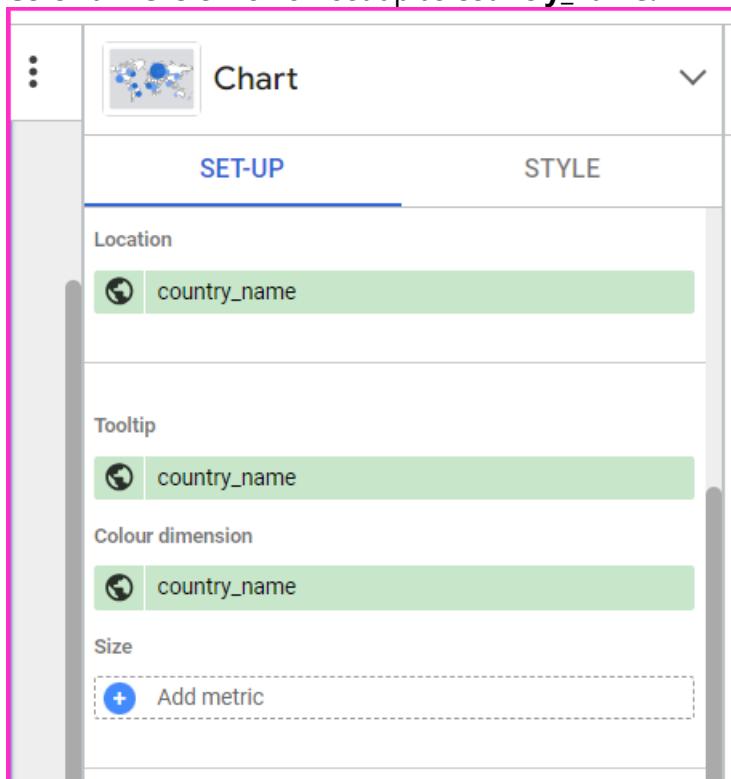


Color dimension = country_name

I click on **Color Dimension** and select **country_name**.



Color dimension is now set up as **country_name**.



Size = no_of_meps

I click on **Size** and select **no_of_meps**.

The screenshot shows the 'SET-UP' tab of a Google Looker Studio chart configuration. A pink box highlights the 'Size' section. A pink arrow points from the 'Size' label to the 'no_of_meps' option in the dropdown menu, which is highlighted with a grey box. Other options in the dropdown include 'Record Count', 'country_id', 'country_name', and 'political_group_code'. The 'no_of_meps' option is selected.

Chart

SET-UP STYLE

Location

country_name

Tooltip

country_name

Colour dimension

country_name

Size

+ Add icon

Default group

123 Record Count

country_id

country_name

123 no_of_meps

political_group_code

political_group_name

Filter

Filter On This Chart

+ ADD A FILTER

Chart interactions

Cross-filtering

Type to search

+ Add icon

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Size is now set up as **no_of_meps**.

Chart

SET-UP STYLE

Location

country_name

Tooltip

country_name

Colour dimension

country_name

Size

SUM no_of_meps

This is what my Bubble Map looks like now.



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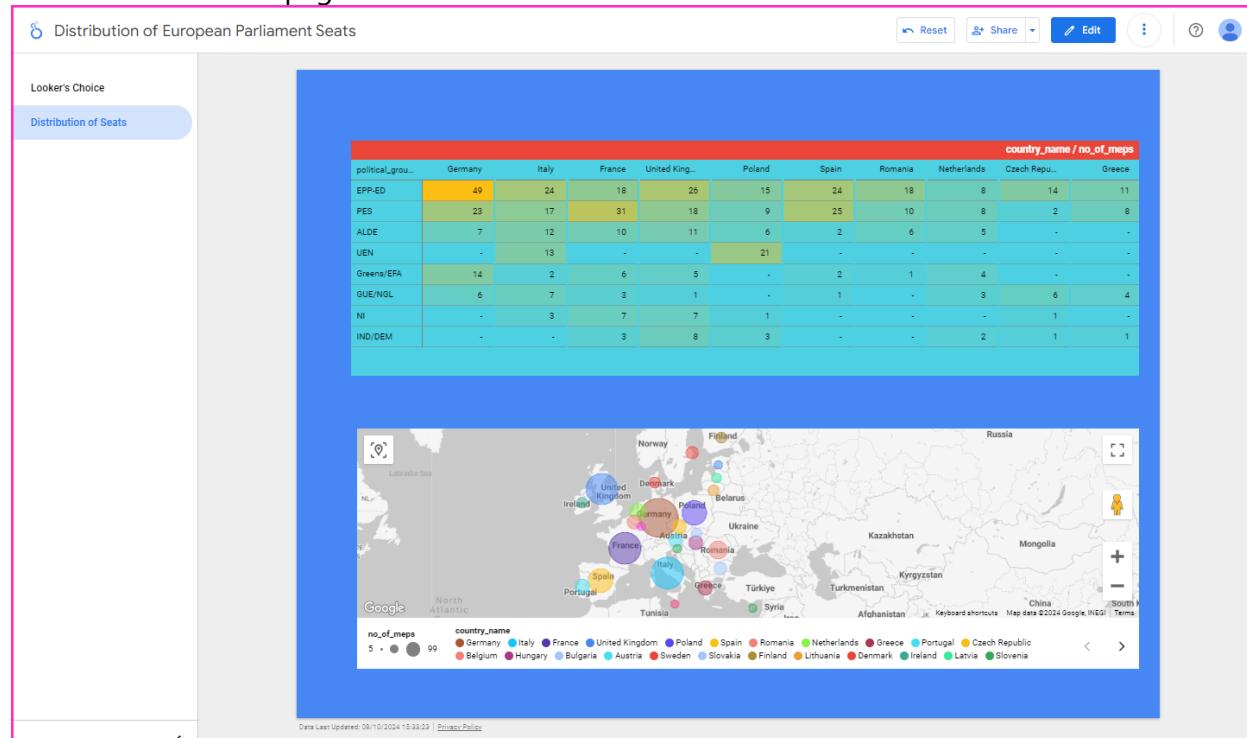
I magnify it around Europe, as I am only interested in countries in the **European Union**.
Size of the Bubbles are proportional to the **Number of the Members of the Parliament** in that **Country**.

Tooltip works. On the screen, I can see Netherlands, where my tooltip (mouse) is.



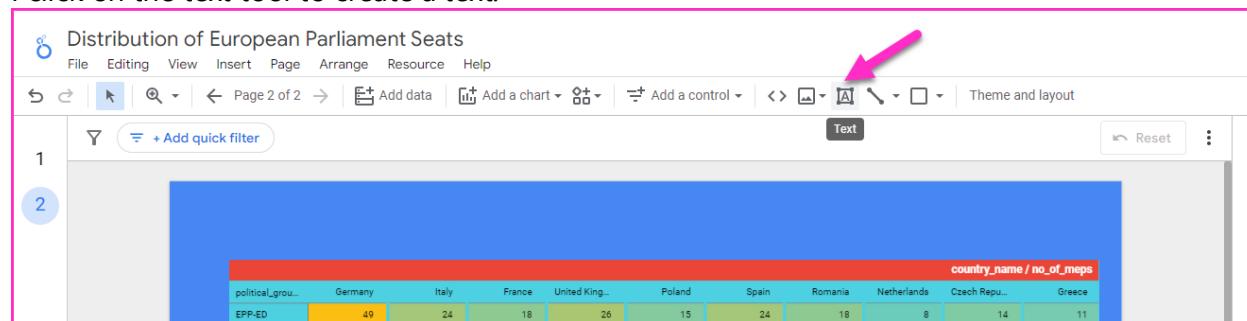
Add Titles to the Second Page Charts

Charts in the second page do not have titles.

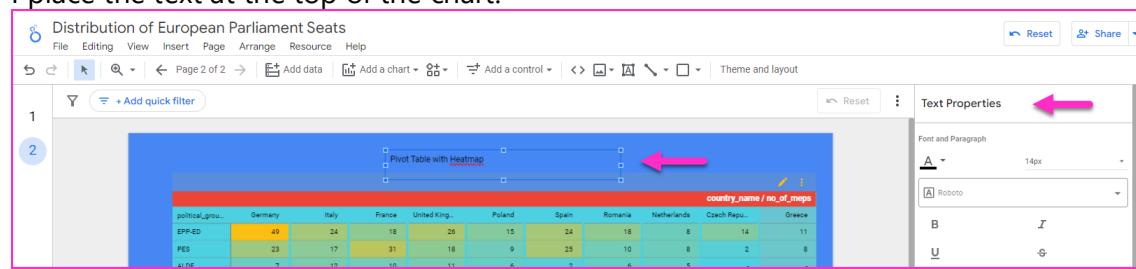


Add title to the Heatmap

I click on the text tool to create a text.



I place the text at the top of the chart.

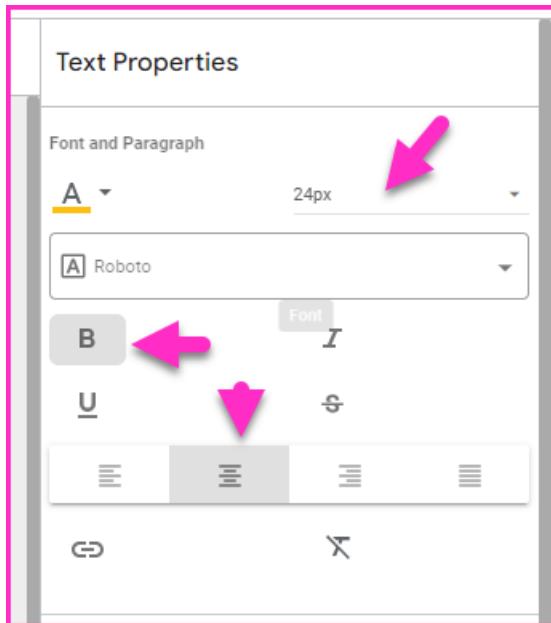


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I change the **Text Color** and the **Font Size**.

I make it **Bold**.

I **center** the text.



Here is the end result.

political_group	Germany	Italy	France	United Kingdom	Poland	Spain	Romania	Netherlands	Czech Republic	Greece
EPP-ED	49	24	18	26	15	24	18	8	14	11
PES	23	17	31	18	9	25	10	8	2	8
ALDE	7	12	10	11	6	2	6	5	-	-
UEN	-	13	-	-	21	-	-	-	-	-
Greens/EFA	14	2	6	5	-	2	1	4	-	-
GUE/NGL	6	7	3	1	-	1	-	3	6	4
NI	-	3	7	7	1	-	-	-	1	-
IND/DEM	-	-	3	8	3	-	-	2	1	1

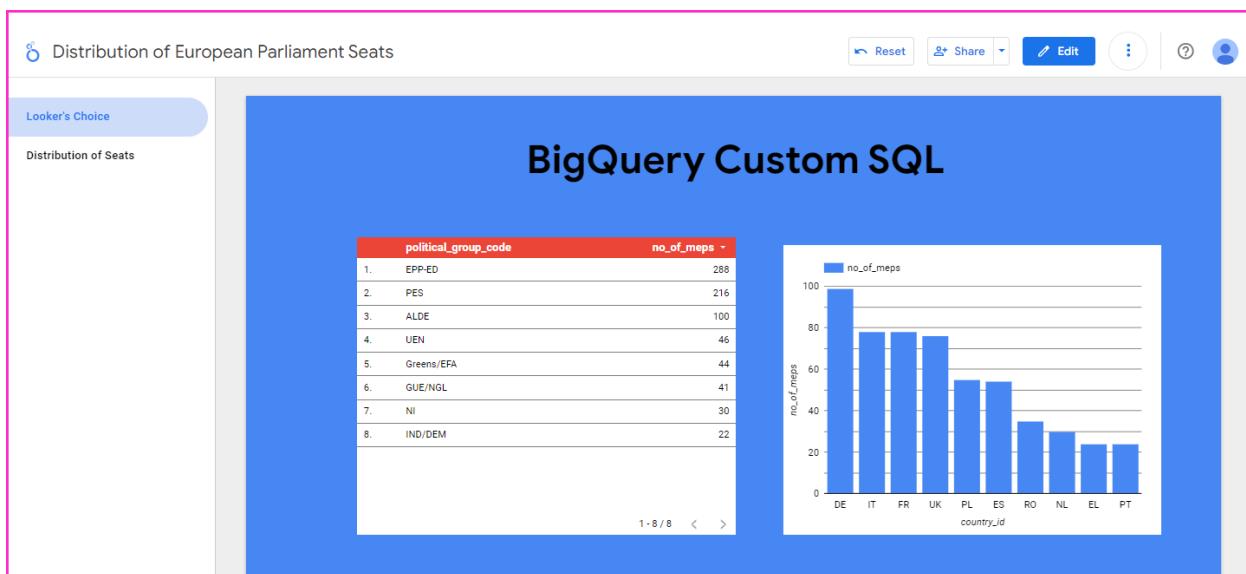
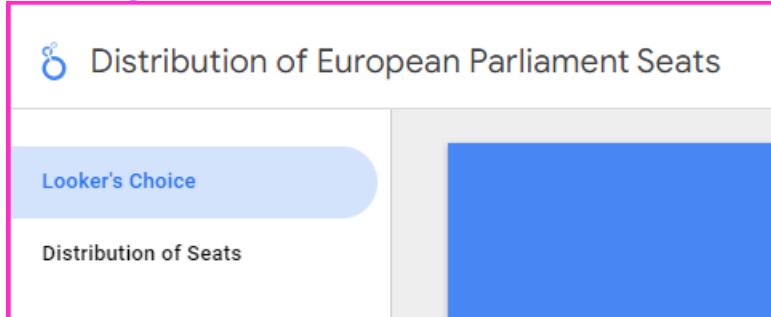
Add title to the Bubble Map

I add a title to the Google Bubble Map, in the same way.

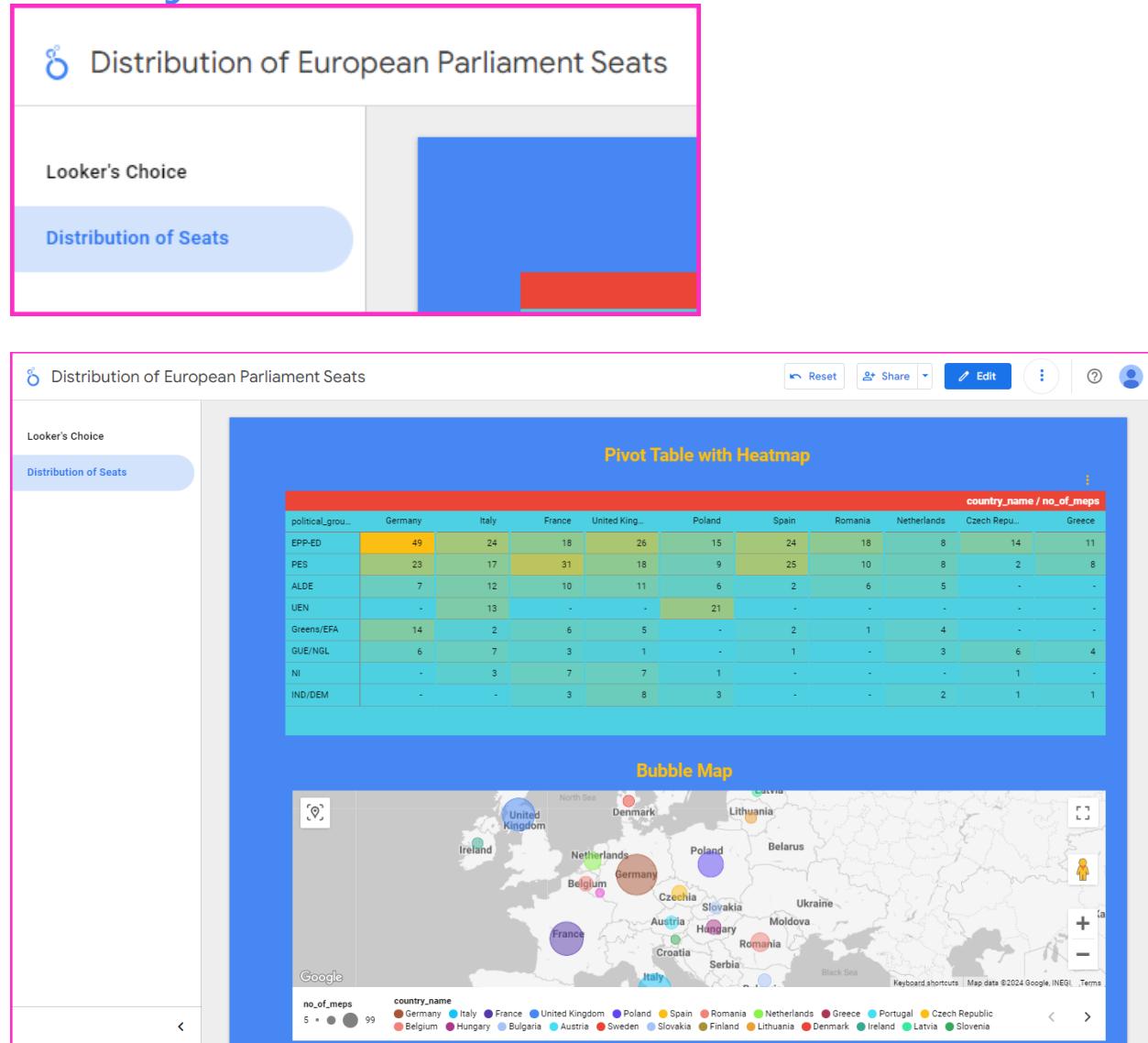


This is What My Report Looks Like Now

First Page: Looker's Choice



Second Page: Distribution of Seats



The End

This is the end of "[How to Create a Report in Google Cloud Looker Studio](#)".

I wish you good health, courage, hope, strength and the will to go after your dreams.



**START
WHERE
YOU ARE.
USE WHAT
YOU HAVE.
DO WHAT
YOU CAN.**

Remember,
You Can
**START LATE
START OVER
BE UNSURE
ACT DIFFERENT
TRY AND FAIL
and still
SUCCEED.**