Hands-On Activity: Explore movie data with pivot tables

TOTAL POINTS 2

1.

Activity overview

In the previous video, you were introduced to pivot tables as a tool for quickly comparing metrics, performing calculations, and generating readable reports. In this activity, you will create and work with pivot tables using the movie spreadsheet from the video to draw new insights into this dataset and create visualizations to share with stakeholders.

By the time you complete this activity, you will be able to apply pivot tables in your own analysis projects. This will enable you to draw insights and create reports directly from your spreadsheets, which is important for your career as a data analyst.

What you will need

To get started, first access the movie spreadsheet from the previous video.

Click the link to the movie spreadsheet to create a copy. If you don't have a Google account, you may download the data directly from the attachments below.

Link to movie data: movie data starter project

OR

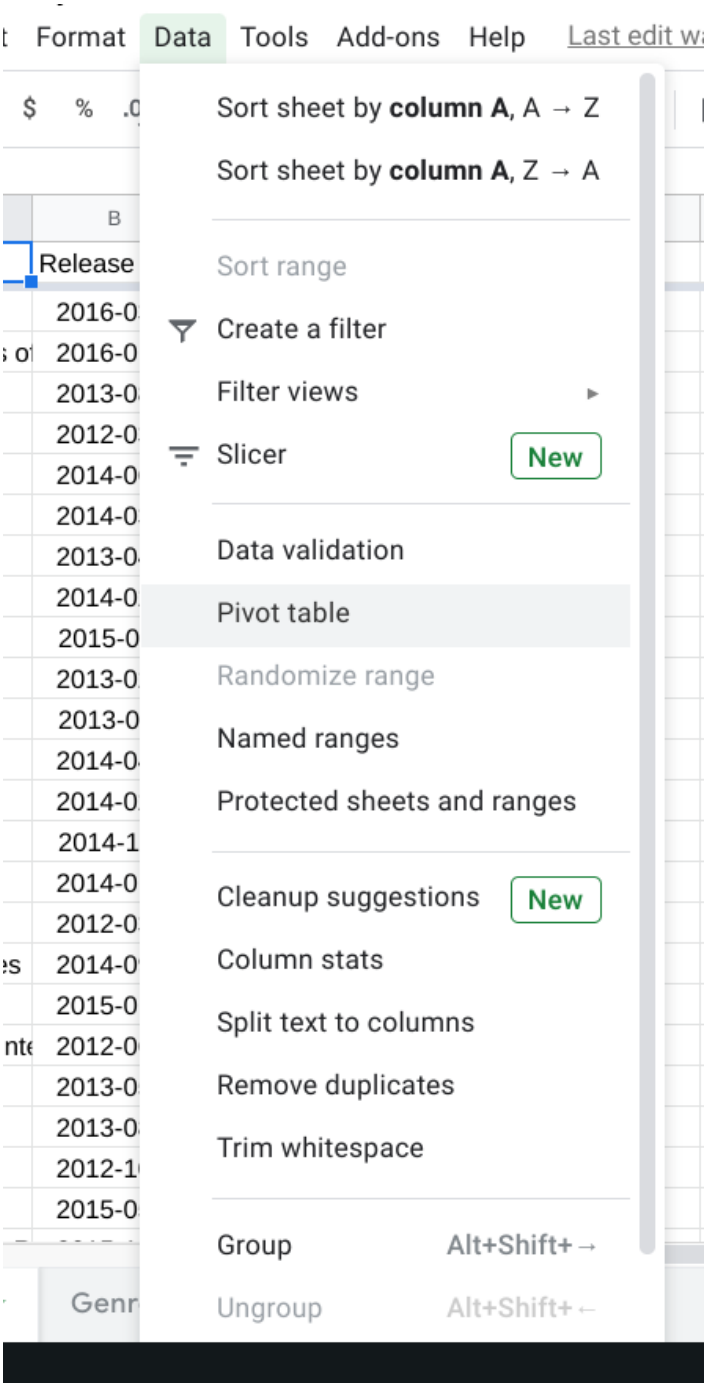
Download data:

Movie Data Starter Project.xlsx

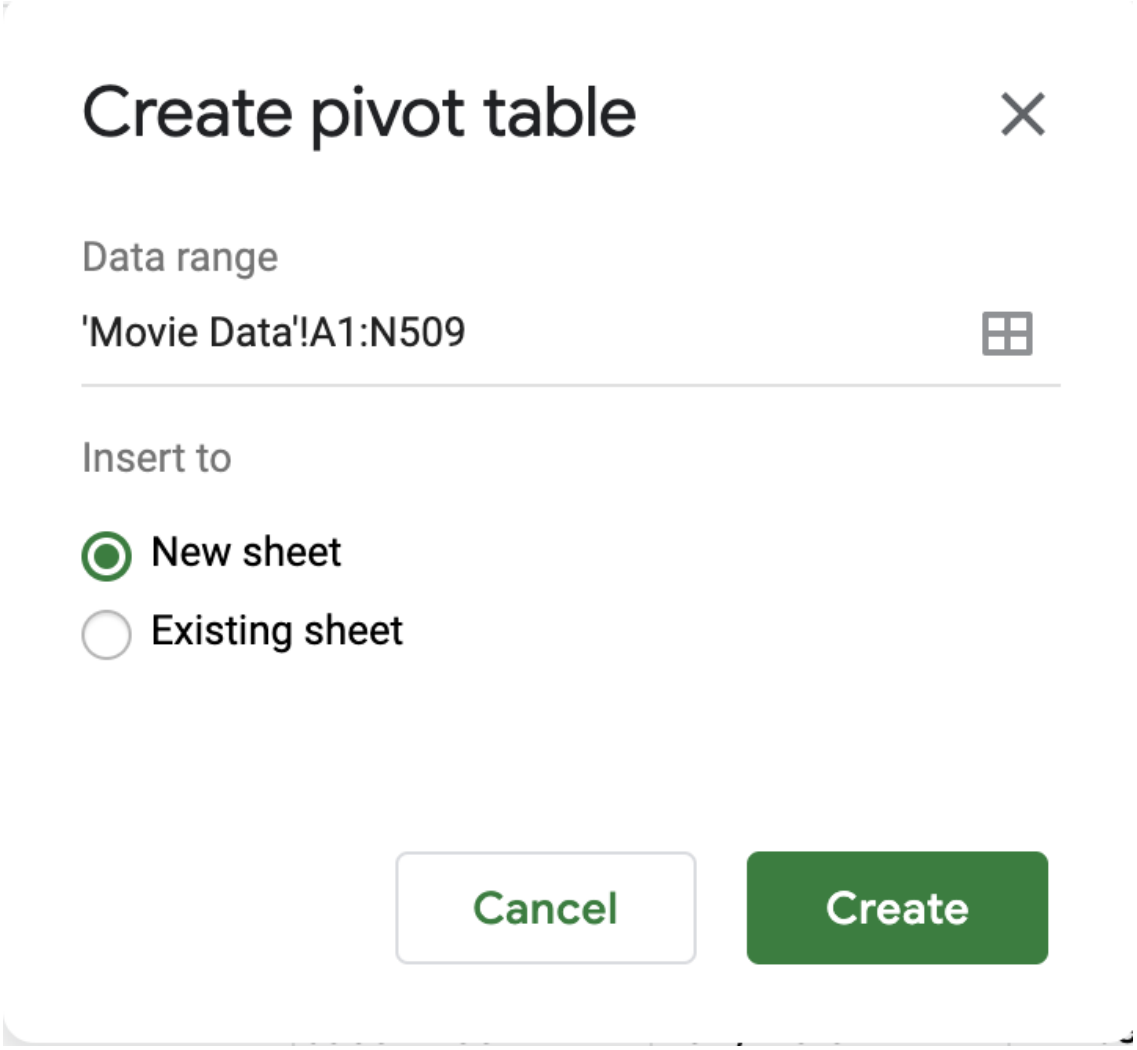
Create your pivot table

Once you have the movie data spreadsheet, you can create a pivot table to run calculations and generate reports.

Open the spreadsheet. **Use the Data menu** to create a pivot table.



Insert your pivot table into a new sheet. Click Create. The data range should already be filled in as 'Movie Data'!A1:N509.



Rename your new sheet Summary.

This will open the Pivot table editor, where you will be able to edit your pivot table and add custom calculations.

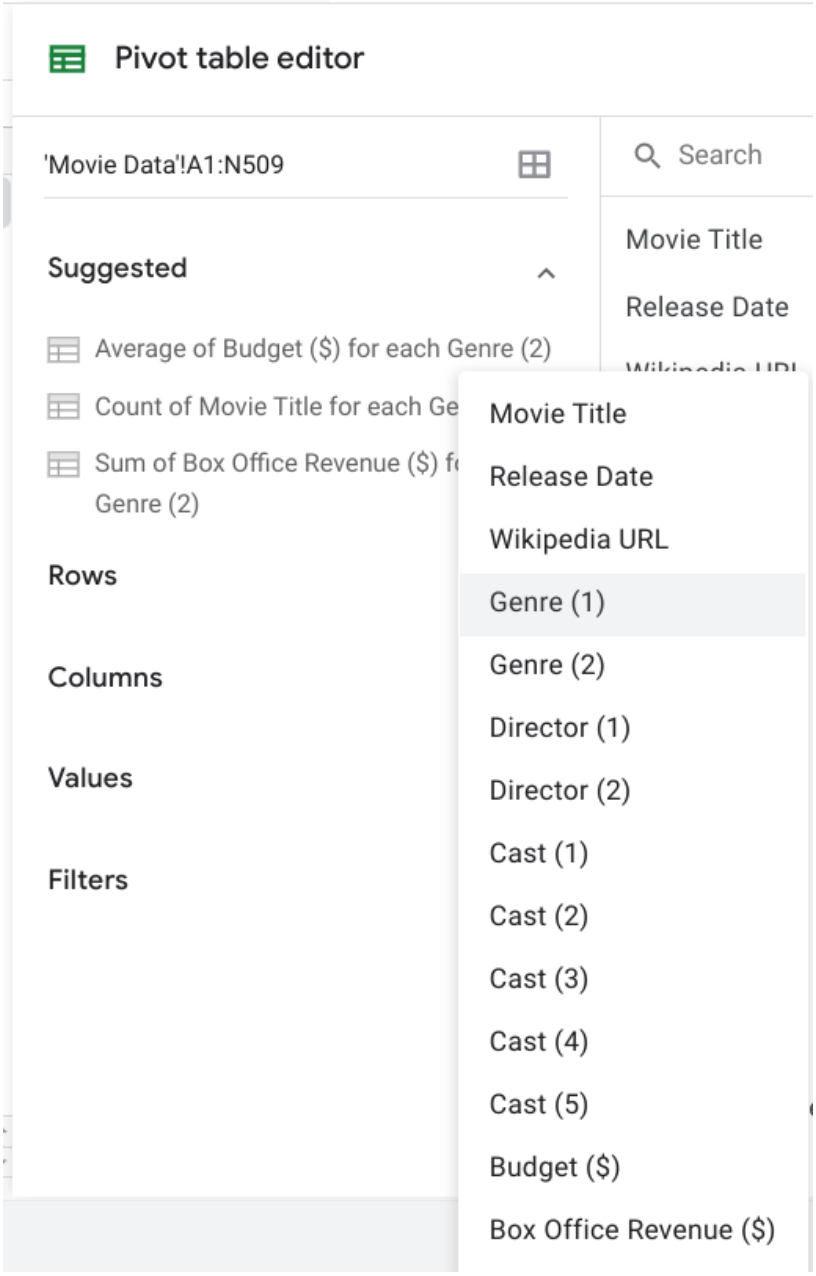
Using pivot tables to answer questions

Now that you have created your pivot table, you can use it to answer specific questions about your data quickly and easily. For example:

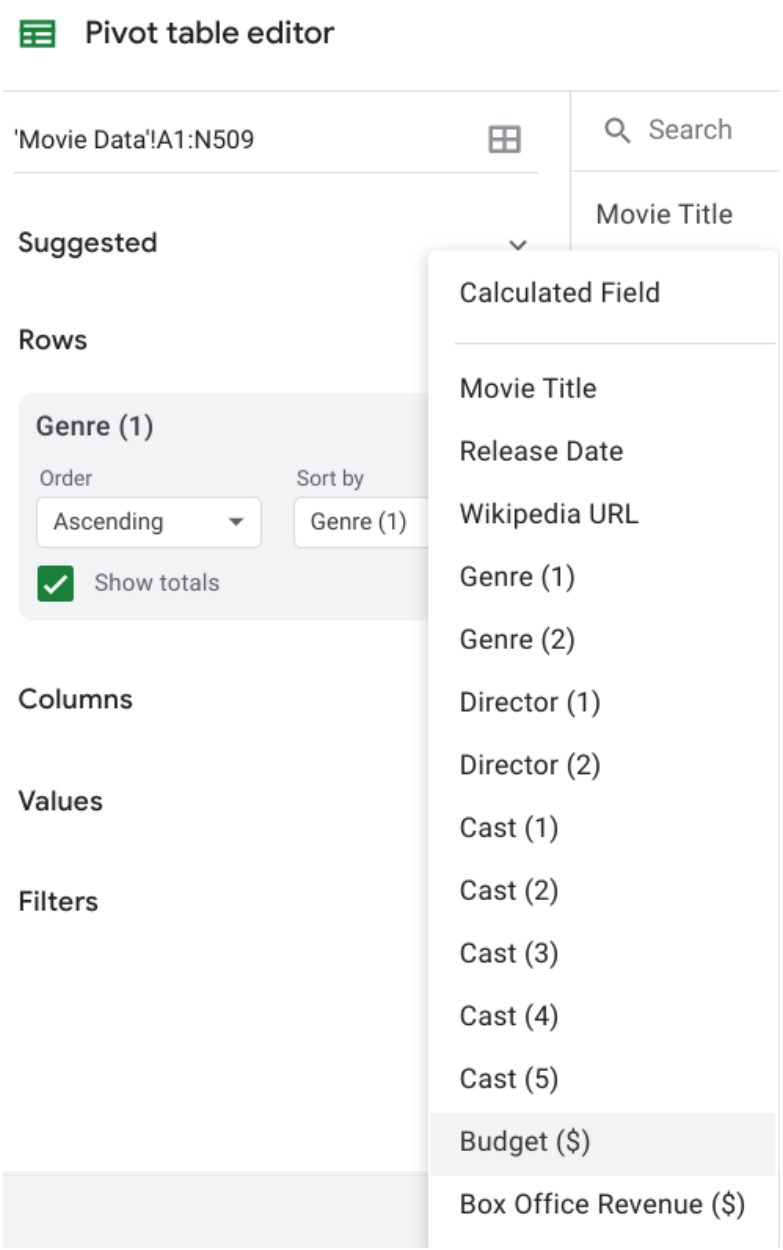
- What is the average budget for each genre?
- What is the average revenue for each genre?
- Which genre is generally the most profitable?

Pivot tables are a useful way to draw these kinds of insights directly from your spreadsheet data.

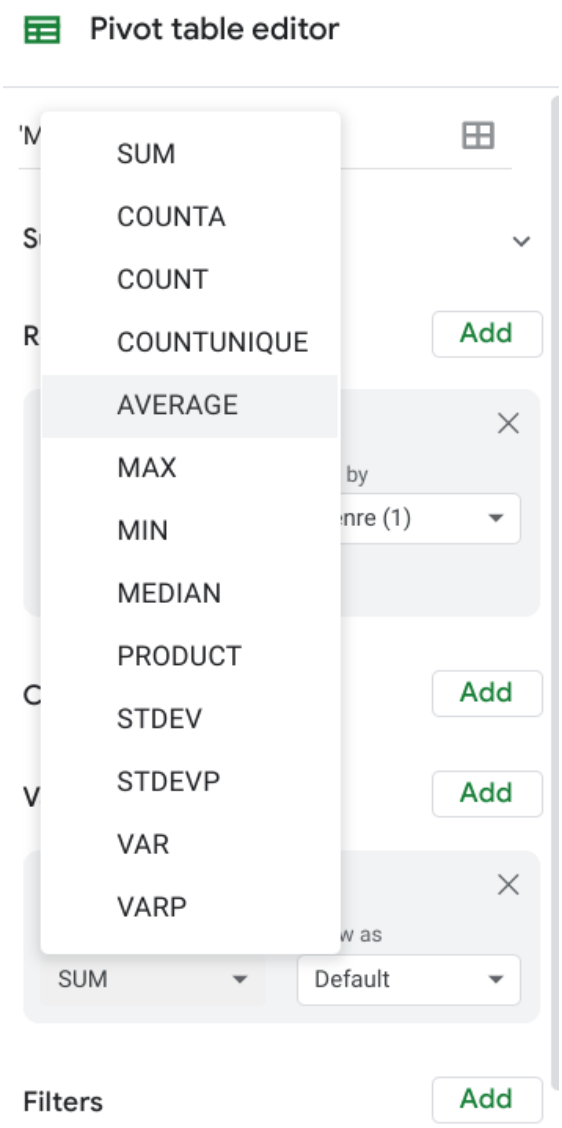
1. To get the average budget and revenue for each movie genre, first you will **use the Add button next to the Rows section** of the Pivot table editor and **select Genre (1)** from the dropdown list.



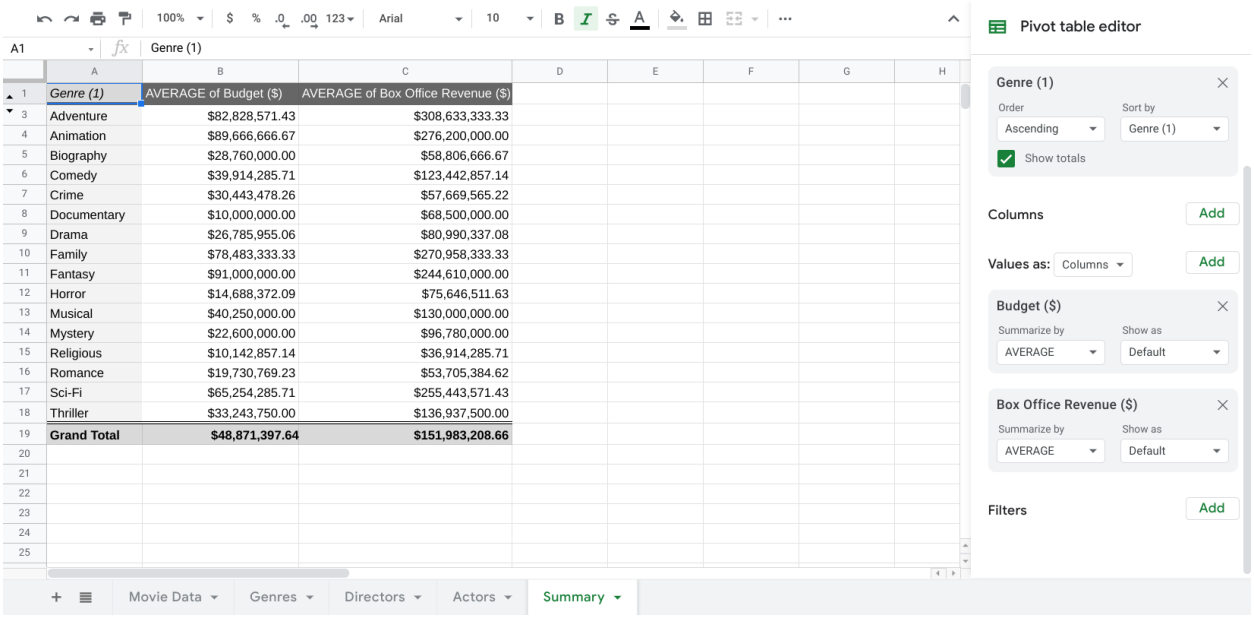
2. Next, you will use the Values section to add the average budget and average box office revenue. **Click the Add button next to Values** and **select Budget.**



The pivot table will summarize these values from the original data by SUM automatically. **Change it to AVERAGE** using the dropdown menu.

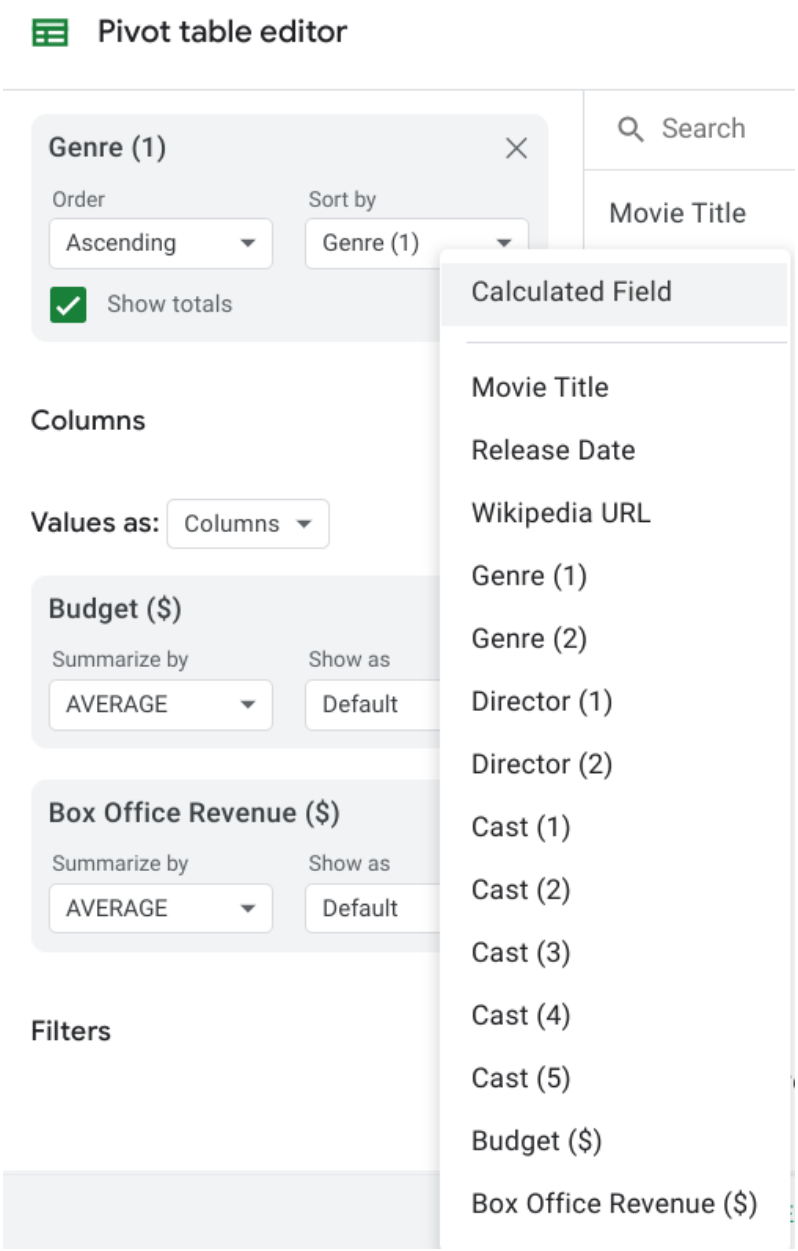


Now you should have a column in your pivot table titled AVERAGE of Budget ($). **Repeat these steps** to create another column **for AVERAGE of Box Office Revenue ($).** Your pivot table should now appear like this:



Now you can easily find the average Budget ($) and Box Office Revenue ($) for each genre.

3. In order to find the average net profit for each genre, you will need to create a calculated field. **Use the Add button in the Values section and select Calculated field** from the dropdown list.



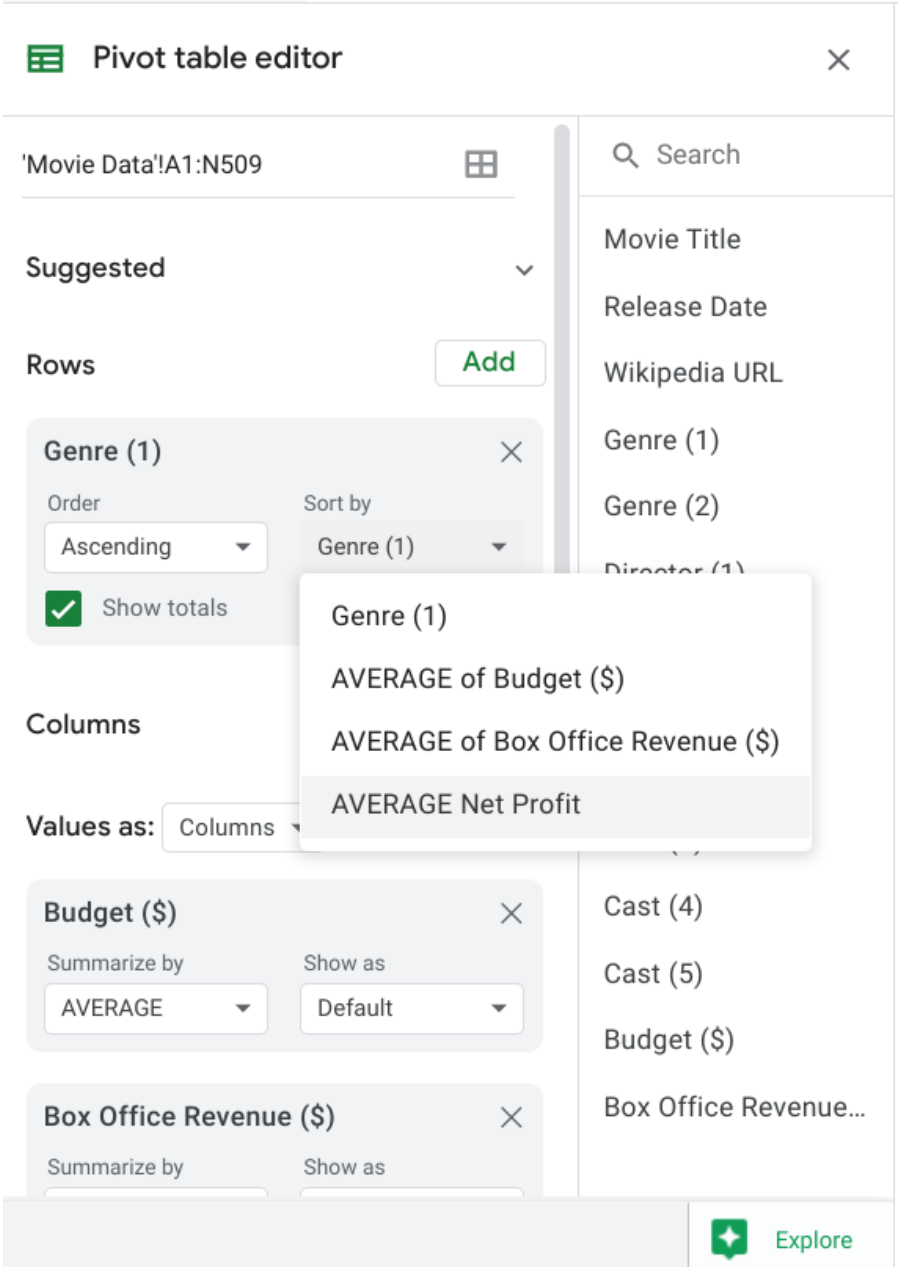
Input Custom under the Summarize By option and **paste this formula to get the average profit:**

=AVERAGE('Box Office Revenue ($)')-AVERAGE('Budget ($)')

Mark Summarize by Custom to avoid creating an error. Title the new column you created with the calculated field ***AVERAGE Profit*** in cell D1**.** Your pivot table should now appear like this:

	A	B	C	D
1	*Genre (1)*	AVERAGE of Budget ($)	AVERAGE of Box Office Revenue ($)	AVERAGE Profit
2	Adventure	82,828,571.43	308,633,333.33	225,804,761.90
3	Family	78,483,333.33	270,958,333.33	192,475,000.00
4	Sci-Fi	65,254,285.71	255,443,571.43	190,189,285.71
5	Animation	89,666,666.67	276,200,000.00	186,533,333.33
6	Fantasy	91,000,000.00	244,610,000.00	153,610,000.00
7	Action	82,810,000.00	233,839,500.00	151,029,500.00
8	Thriller	33,243,750.00	136,937,500.00	103,693,750.00
9	Musical	40,250,000.00	130,000,000.00	89,750,000.00
10	Comedy	39,914,285.71	123,442,857.14	83,528,571.43
11	Mystery	22,600,000.00	96,780,000.00	74,180,000.00
12	Horror	14,688,372.09	75,646,511.63	60,958,139.53
13	Documentary	10,000,000.00	68,500,000.00	58,500,000.00
14	Drama	26,785,955.06	80,990,337.08	54,204,382.02
15	Romance	19,730,769.23	53,705,384.62	33,974,615.38
16	Biography	28,760,000.00	58,806,666.67	30,046,666.67
17	Crime	30,443,478.26	57,669,565.22	27,226,086.96
18	Religious	10,142,857.14	36,914,285.71	26,771,428.57

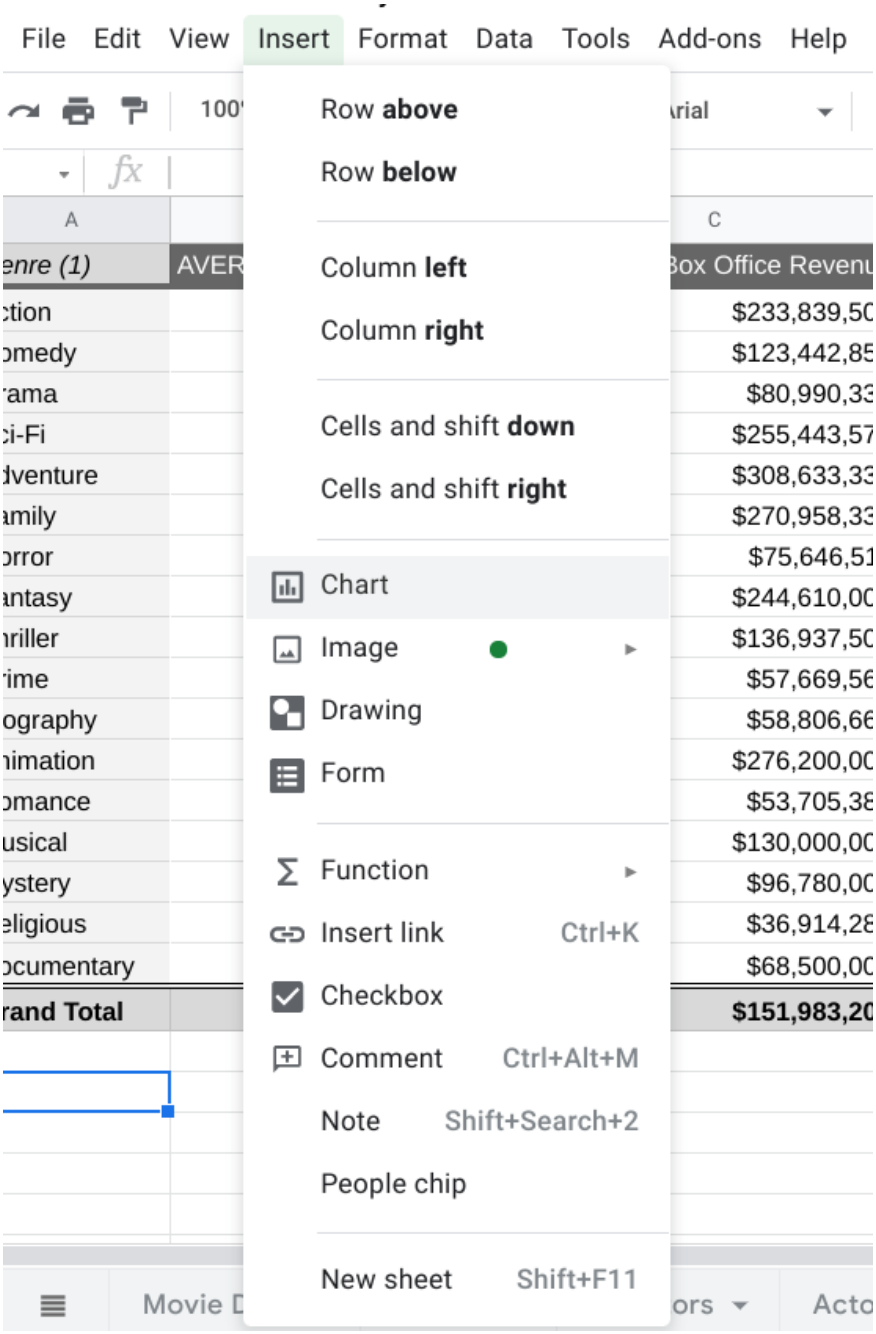
4. Finally, you can use the Sort by option in the Rows section of the pivot table to sort and organize your pivot table. For example, try **sorting by the AVERAGE Profit** values to see which genre generates the most profit on average.



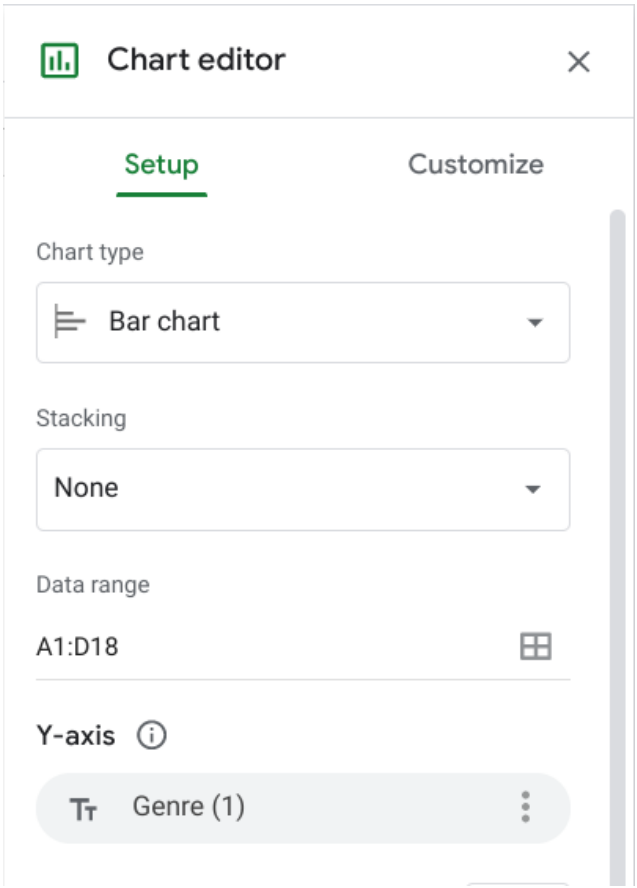
Visualizing your data

You can create some basic visualizations based on your custom tables to share your findings with stakeholders.

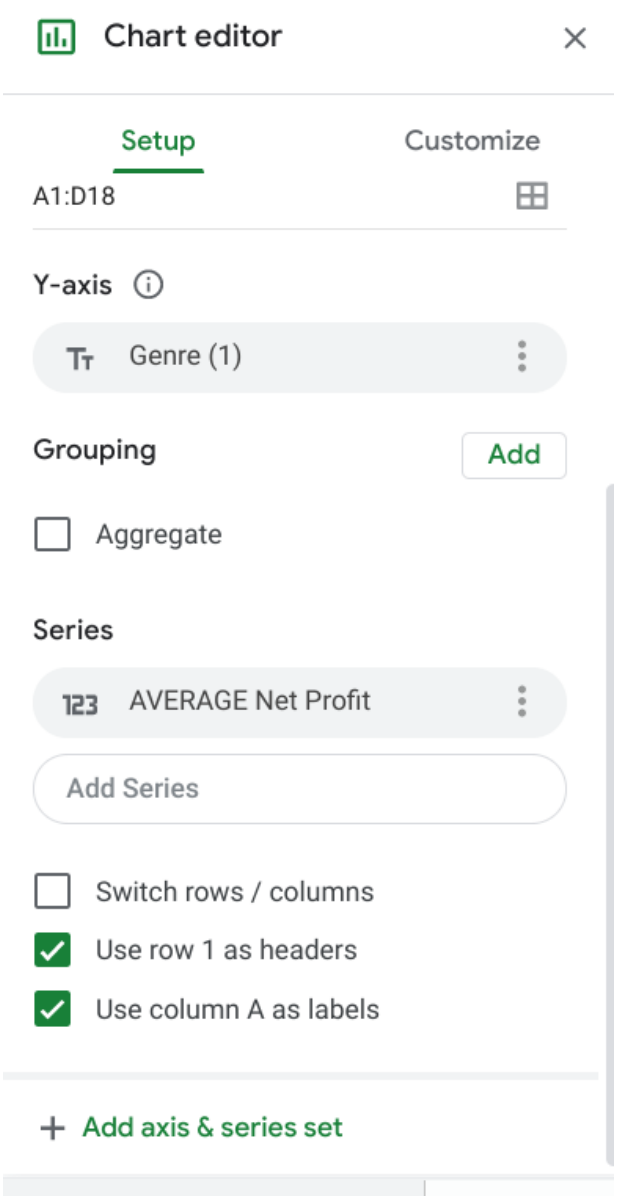
Select any cell in your pivot table and then **navigate to the Insert menu. Select Insert Chart.**



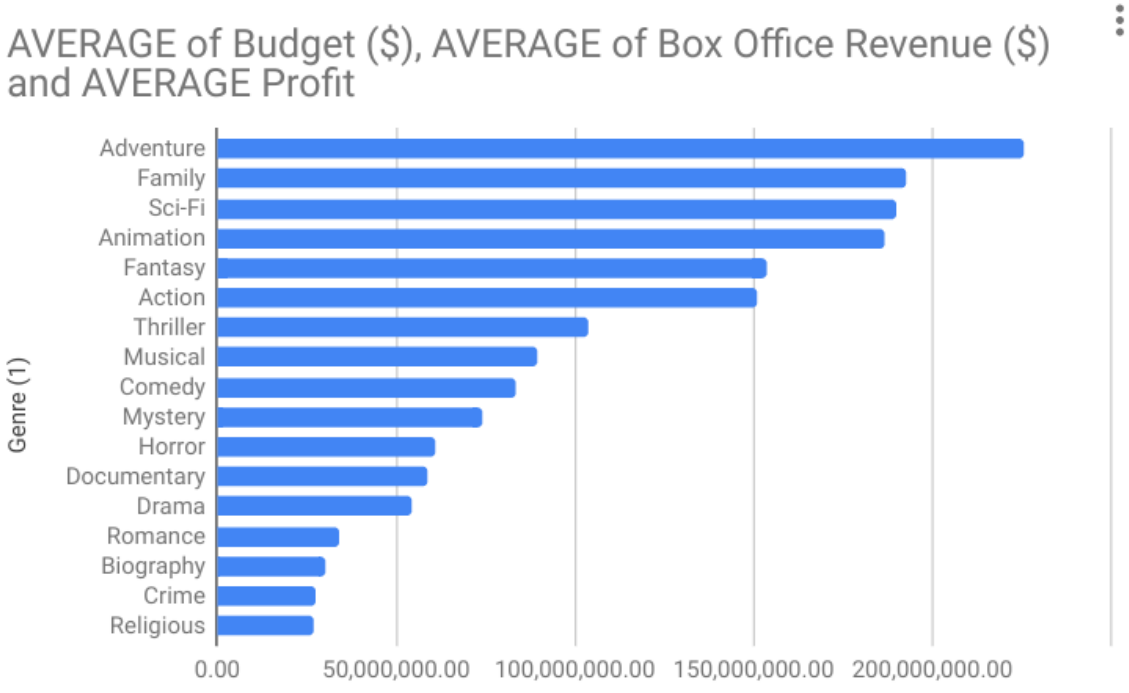
This will create a chart in the same worksheet as your pivot table. Move it next to your pivot table. In the Chart editor, **select Bar chart**. This type of chart makes it easy for your stakeholders to compare the different genres.



Input A1:D18 for the Data range to select the meaningful values from your pivot table. **Set the Y-axis as Genre(1). Add AVERAGE Profit** to the Series list and **check Use row 1 as headers** and **Use column A as labels.**



Finally, change the title of your visualization so that your stakeholders know exactly what you're communicating. You can also customize the color palette using the Customize menu in the Chart editor pane.


AVERAGE of Budget ($), AVERAGE of Box Office Revenue ($) and AVERAGE Profit
Genre (1)
Adventure
Family
Sci-Fi
Animation
Fantasy
Action
Thriller
Musical
Comedy
Mystery
Horror
Documentary
Drama
Romance
Biography
Crime
Religious
0.00
50,000,000.00
100,000,000.00
150,000,000.00
200,000,000.00