

1. I already knew how to add conditional formatting with the Excel ribbon.
2. I already know that percent funded is equal to $(100(\text{pledged}/\text{goal}))$. I accepted Excel's autocorrect to $100*(\text{actual}/\text{goal})$.
3. I knew that Average Donation would equal $(\text{pledged}/\text{backers_count})$. I was unsure how to fix the divide by zero error, so I followed up in office hours.
 - a. During office hours, I learned to use and "If" statement to return 0 rather than divide by 0
4. In office hours (via Xpert AI) I learned how to split into parent and sub categories, and learned how to use Left, Right commands in Excel to split columns.
5. Pivot tables were made following instructions to do so in class.
6. Conclusions, limitations, and suggestions are all my own original thought.
7. I see that one of my suggestions is more or less what the next step in the Homework is.
8. I did not recall learning "Countifs()" formulas in class, so I asked Xpert AI the following:

In Microsoft Excel for Windows, I want to use the Countifs() function to categorize how many data points fit into each category. My Columns are "Number Successful" "Number Failed" and "Number Canceled". My rows are "Less Than 1000" "1000 to 4999" "5000 to 9999" "10000 to 14999" "15000 to 19999" "20000 to 24999" "25000 to 29999" "30000 to 34999" "35000 to 39999" "40000 to 44999" "45000 to 49999" and "Greater than or Equal to 50000". The data fields I am pulling from are "Outcome" which returns a status of either "Failed" "Successful" "Live" or "Canceled" and "backers_count" which gives a number which determines what row the data will go on in my chart. How do I write this code for Excel?

9. Xpert AI provided the following answer:

To categorize your data points using the COUNTIFS() function in Excel, you'll want to set up your formula to count the number of occurrences based on the criteria you specified for both the "Outcome" and "backers_count" columns.

Here's how you can write the COUNTIFS() formulas for each category:

1. **Number Successful:**

- For "Less than 1000":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, "<1000")
- For "1000 to 4999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=1000", backers_countRange, "<5000")
- For "5000 to 9999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=5000", backers_countRange, "<10000")
- For "10000 to 14999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=10000", backers_countRange, "<15000")
- For "15000 to 19999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=15000", backers_countRange, "<20000")

- For "20000 to 24999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=20000", backers_countRange, "<25000")
- For "25000 to 29999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=25000", backers_countRange, "<30000")
- For "30000 to 34999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=30000", backers_countRange, "<35000")
- For "35000 to 39999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=35000", backers_countRange, "<40000")
- For "40000 to 44999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=40000", backers_countRange, "<45000")
- For "45000 to 49999":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=45000", backers_countRange, "<50000")
- For "Greater than or equal to 50000":
- =COUNTIFS(OutcomeRange, "Successful", backers_countRange, ">=50000")

2. Number Failed:

- You would replace "Successful" with "Failed" in the formulas above.

3. Number Canceled:

- You would replace "Successful" with "Canceled" in the formulas above.

Make sure to replace OutcomeRange and backers_countRange with the actual cell ranges that contain your data. For example, if your outcomes are in column A from row 2 to row 100, you would use A2:A100 as your OutcomeRange.

This setup will allow you to categorize and count the data points based on your specified criteria.

10. I edited the code provided by Xpert AI to “=COUNTIFS(Crowdfunding!F:F, "Successful", Crowdfunding!G:G, "<1000")” for the number of successful projects with less than 1000 backers on sheet “Goal Analysis” and got the answer “408”, which matched the count of projects that fit those criteria. I decided to continue editing the codes provided by Xpert with the same changes to complete the chart.

- a. I later realized that I had misread the instructions and was finding data points for number of backers, not goal funding. I corrected this and used Column D instead of Column G in the same formulas.

11. I was having trouble with my formula changing when I copied it to the next column to count failed projects, so I asked Xpert this:

In Microsoft Excel for Windows, I am trying to copy this formula, "=COUNTIFS(Crowdfunding!F:F, "Successful", Crowdfunding!G:G, "<1000")" from cell B1 to cell C1. However, when I paste the formula to cell C1, it automatically changes to the formula to, "=COUNTIFS(Crowdfunding!G:G, "Successful", Crowdfunding!H:H, "<1000")". How do I stop the reference fields from changing when I paste the formula into a new cell?

And it replied with:

To prevent the reference fields from changing when you copy and paste a formula in Excel, you can use absolute references. In your formula, you are currently using relative references, which adjust when you copy the formula to another cell.

To make the references absolute, you need to add dollar signs (\$) before the column letters and row numbers in your formula. Here's how you can modify your formula:

Change:

=COUNTIFS(Crowdfunding!F:F, "Successful", Crowdfunding!G:G, "<1000")

To:

=COUNTIFS(Crowdfunding!\$F:\$F, "Successful", Crowdfunding!\$G:\$G, "<1000")

By adding the dollar signs, the references to columns F and G will remain constant when you copy the formula to another cell. Now, when you paste this formula into cell C1, it will stay as is without changing the references.

- 12. I used absolute references to continue filling out the chart.
- 13. I made a graph and used the Excel tools to set Axis names.
- 14. I used filters to get columns with counts of backers for successful and failed projects, then copied them to the Statistical analysis sheet. I used the Excel auto-suggestions when I began typing to determine formulas for mean, median, mode, minimum, maximum, variance, and standard deviation.