Using a Highlight Table to Show Specific Values

You've created a text table that shows all the sales values in your data set. But there's too much data there for you to quickly identify which products sold well or which sold poorly, which are questions you want to answer.

Turn your text table into a highlight table, which allows you to show all the data while making patterns, such as increasing or decreasing sales values, easier to see. A highlight table uses color on a gradient, weighted by a measure, to emphasize values all along the range in your data set. With the right color palette, trends and specific values will stand out, helping you in your analysis and decision making.

In this module, you'll discover the benefits of using a highlight table, and you'll learn how to turn a text table into a highlight table that shows patterns and outliers, using diverging color palettes to make your highlight table easy to interpret.

Note: The content in this module applies to authoring in Tableau Desktop, Tableau Online, and Tableau Server. You can complete the activities in your choice of environment.

Objectives

At the end of this module, you will be able to:

- Describe a highlight table and how it helps identify patterns and high and low values in the data.

- Build a highlight table and interpret the data displayed.

The purpose of a highlight table

Try it! Build a highlight table to show profit data

The purpose of a highlight table

Sometimes, we need to represent the specific values in our data alongside our visualizations. A **highlight table** is useful for showing data values while also revealing key values—such as the highest or lowest—which may also reveal patterns in the data.

Do I need a highlight table?

When you are deciding whether a highlight table is a good chart type for your data source and the analysis you want to do, consider the following questions:

- Do you need to present specific values that are in your data?
- Are you interested in identifying patterns or outliers within the context of your entire data set?
- Is the use of color to identify patterns or outliers in your data set sufficient to achieve your visualization goals?

A highlight table enables you to apply color to a text table when you need to show every value but also want to show patterns or extreme values.

For example, the text table below is great for its wealth of data about academic grades, displaying percentage points on exams and homework for a group of students. All of the information is right there in the table.

But it's not that easy to interpret, is it? Even with all the data present, it's hard to quickly glean anything from it when it's presented like this.

Grades

Name	Exam 1	Exam 2	Exam 3	Homework 1	Homework 2	Homework 3	Homework 4
Aaron Torres	81.0	86.0	82.0	83.0	80.0	81.0	76.0
Adam Cox	90.0	90.0	83.0	90.0	94.0	72.0	74.0
Alfredo Patton	67.0	61.0	65.0	68.0	90.0	78.0	58.0
Ann James	83.0	91.0	92.0	81.0	80.0	83.0	88.0
Anna White	61.0	75.0	81.0	83.0	0.0	88.0	79.0
Arielle Matthew	81.0	85.0	78.0	82.0	75.0	84.0	76.0
Arnoldo Charles	92.0	76.0	84.0	77.0	0.0	84.0	70.0
Barry Salazar	97.0	100.0	77.0	66.0	93.0	98.0	90.0
Ben Shaw	90.0	89.0	91.0	91.0	89.0	82.0	76.0
Beverly Gonzalez	82.0	85.0	83.0	76.0	78.0	76.0	80.0
Bobby Ramos	96.0	95.0	95.0	90.0	98.0	93.0	86.0
Bonnie Taylor	84.0	86.0	87.0	84.0	73.0	84.0	0.0
Brad Long	98.0	97.0	98.0	97.0	93.0	99.0	93.0

A text table shows all of the values in the data but does not distinguish patterns.

Now try the following experiment: Examine the data in the text table above for five seconds. Then answer the following question: Which student scored in the 60s on all three exams and the first homework assignment listed?

Could you answer?

You could answer the question more easily if you were able to see the same information presented in a different format.

Try the experiment again, this time with the same data shown in the highlight table below, where all scores below 75% are represented in shades of orange and all scores above 75% are in shades of blue. Look at the table for five seconds, then try again to answer the question: Which student scored in the 60s on all three exams and the first homework assignment?

Grades

Name	Exam 1	Exam 2	Exam 3	Homework 1	Homework 2	Homework 3	Homework 4
Aaron Torres	81.0	86.0	82.0	83.0	80.0	81.0	76.0
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Ann James	83.0	91.0	92.0	81.0	80.0	83.0	88.0
Anna White	61.0	75.0	81.0	83.0	0.0	88.0	79.0
Arielle Matthew	81.0	85.0	78.0	82.0	75.0	84.0	76.0
Arnoldo Charles	92.0	76.0	84.0	77.0	0.0	84.0	70.0
Barry Salazar	97.0	100.0	77.0	66.0	93.0	98.0	90.0
Ben Shaw	90.0	89.0	91.0	91.0	89.0	82.0	76.0
Beverly Gonzalez	82.0	85.0	83.0	76.0	78.0	76.0	80.0
Bobby Ramos	96.0	95.0	95.0	90.0	98.0	93.0	86.0
Bonnie Taylor	84.0	86.0	87.0	84.0	73.0	84.0	0.0
Brad Long	98.0	97.0	98.0	97.0	93.0	99.0	93.0

A highlight table uses color to call out patterns in the data, and to show unusually high and low values.

Were you able to quickly see amid all the data that the student with those scores was **Alfredo Patton**?

Highlight tables are a good option for when you need to present your entire data set and you also need to point out patterns and distinguish specific values. In the above highlight table, the lower a score is, the deeper its shade of orange, all the way down to burnt red for zero, whereas the higher a score is, the deeper its shade of blue. This use of color brings into bright relief the series of low scores for Alfredo Patton. We were able to get this result by showing the grade values in color.

Also, as we noted above, the table reflects a split in color at a certain point in the range of values: 75%. How did we achieve that? Let's find out in the following video, where we start with a text table and finish up with a highlight table.

Click **Play** to watch the video below.

How to build a highlight table

Knowledge check

Which three areas of the **Marks** card do you use to build a highlight table?

- [ ] **Color**, **Text** and **Detail**
- [ ] **Color**, **Text** and **Mark** type
- [ ] **Color**, **Mark** type and **Size**
- [ ] **Size**, **Detail** and **Text**

SUBMIT

Try it! Build a highlight table to show profit data

We've explored using a highlight table to reveal and analyze patterns in a data set. Here's your opportunity to apply your knowledge by building a highlight table to analyze sales data.

Hands-on activity

You will need Tableau Desktop, Tableau Online or Tableau Server for this hands-on activity.

If you do not already have Tableau Desktop or Tableau Online installed, you may purchase or download free trial versions of either one from the following locations:

- Tableau Desktop
- Tableau Online

Note: The free trial is available for a limited number of days.

Scenario

You've been asked to create a view for colleagues to show them the highest and lowest profit sub-categories of products across different markets and regions. Build a highlight table that shows specific profit values in your data set, so that the patterns and extreme highs and lows

in the data are easy to spot, helping your team make actionable business decisions about the company's products.

As a bonus, include totals in the highlight table to show which sub-categories were the most and least profitable overall.

Good luck!

Download the **file** below to use with this activity.

FILE

Build a Highlight Table Starter.twbx
7.3 MB

Follow the **steps** below to complete this activity.

- The **Expected result** shows the view at the end of the step.
- The **Hint** provides additional guidance to complete the step.

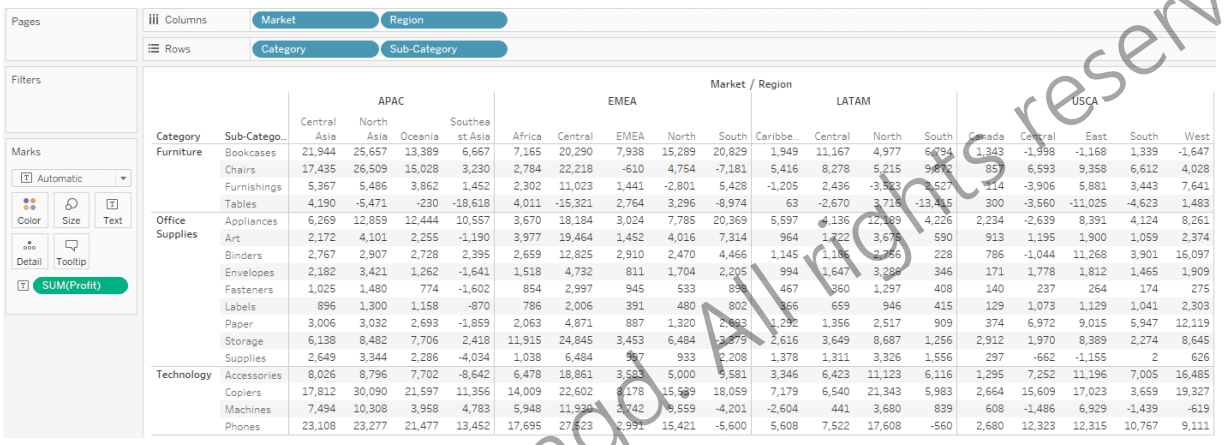
1 Open the starter file in Tableau.

For instructions on how to open a .twbx file in Tableau Desktop or Tableau Online, see the Tableau eLearning User FAQs.

2 Create a text table that shows market and regional profits by **Category** and **Sub-category**.

Expected result

You should see the following after completing this step.



Market / Region

		APAC				EMEA					LATAM				USCA				
Category	Sub-Catego..	Central Asia	North Asia	Oceania	Southeast Asia	Africa	Central	EMEA	North	South	Caribbe..	Central	North	South	Canada	Central	East	South	West
Furniture	Bookcases	21,944	25,657	13,389	6,667	7,165	20,290	7,938	15,289	20,829	1,949	11,167	4,977	6,794	1,343	-1,998	-1,168	1,339	-1,647
	Chairs	17,435	26,509	15,028	3,230	2,784	22,218	-610	4,754	-7,181	5,416	8,278	5,215	9,612	857	6,593	9,358	6,612	4,028
	Furnishings	5,367	5,486	3,862	1,452	2,302	11,023	1,441	-2,801	5,428	-1,205	2,436	-3,523	2,527	114	-3,906	5,881	3,443	7,641
	Tables	4,190	-5,471	-230	-18,618	4,011	-15,321	2,764	3,296	-8,974	63	-2,670	3,715	-13,415	300	-3,560	-11,025	-4,623	1,483
Office Supplies	Appliances	6,269	12,859	12,444	10,557	3,670	18,184	3,024	7,785	20,369	5,597	4,136	12,189	4,226	2,234	-2,639	8,391	4,124	8,261
	Art	2,172	4,101	2,255	-1,190	3,977	19,464	1,452	4,016	7,314	964	1,722	3,675	590	913	1,195	1,900	1,059	2,374
	Binders	2,767	2,907	2,728	2,395	2,659	12,825	2,910	2,470	4,466	1,145	1,186	2,786	228	786	-1,044	11,268	3,901	16,097
	Envelopes	2,182	3,421	1,262	-1,641	1,518	4,732	811	1,704	2,205	994	1,647	3,288	346	171	1,778	1,812	1,465	1,909
	Fasteners	1,025	1,480	774	-1,602	854	2,997	945	533	898	467	360	1,297	408	140	237	264	174	275
	Labels	896	1,300	1,158	-870	786	2,006	391	480	802	366	659	946	415	129	1,073	1,129	1,041	2,303
	Paper	3,006	3,032	2,693	-1,859	2,063	4,871	887	1,320	2,693	1,292	1,356	2,517	909	374	6,972	9,015	5,947	12,119
	Storage	6,138	8,482	7,706	2,418	11,915	24,845	3,453	6,484	3,879	2,616	3,649	8,687	1,256	2,912	1,970	8,389	2,274	8,645
	Supplies	2,649	3,344	2,286	-4,034	1,038	6,484	567	933	2,208	1,378	1,311	3,326	1,556	297	-662	-1,155	2	626
Technology	Accessories	8,026	8,796	7,702	-8,642	6,478	18,861	3,583	5,000	9,581	3,346	6,423	11,123	6,116	1,295	7,252	11,196	7,005	16,485
	Copiers	17,812	30,090	21,597	11,356	14,009	22,602	8,178	15,589	18,059	7,179	6,540	21,343	5,983	2,664	15,609	17,023	3,659	19,327
	Machines	7,494	10,308	3,958	4,783	5,948	11,930	2,742	9,559	-4,201	-2,604	441	3,680	839	608	-1,486	6,929	-1,439	-619
	Phones	23,108	23,277	21,477	13,452	17,695	27,523	2,991	15,421	-5,600	5,608	7,522	17,608	-560	2,680	12,323	12,315	10,767	9,111

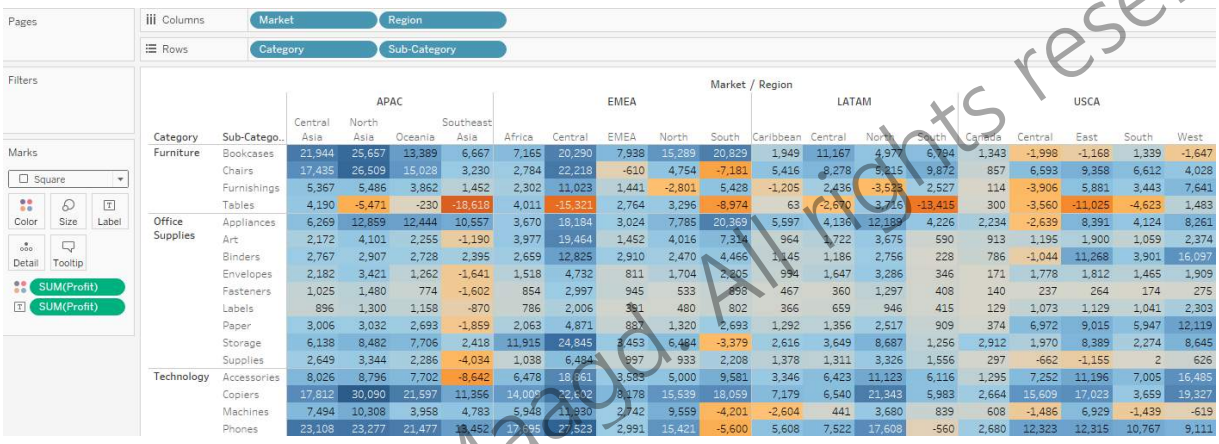
Hint

1. From the **Data** pane, drag **Market** and **Region** to **Columns**, with **Region** to the right of **Market**.
2. From the **Data** pane, drag **Category** and **Sub-Category** to **Rows**, with **Sub-category** to the right of **Category**.
3. From the **Data** pane, drag **Profit** to the view, and drop it when the area showing **Abc** text is highlighted in black and **Show Me** appears.

3 To reveal patterns or outliers in the profit data, create a highlight table that shows **Profit** by color.

Expected result

You should see the following after completing this step.



Hint

1. On the **Marks** card, use **Ctrl**+drag (**Command**+drag on a Mac) to drag a copy of **SUM(Profit)** on **Text** to **Color**.
2. On the **Marks** card, change the mark type to **Square**.

Note that changing the mark type to **Square** also changed **Text** to **Label**.

4 Use the view you've assembled so far to answer the following question.

Which product sub-category was the second most profitable in the **North Asia** region?

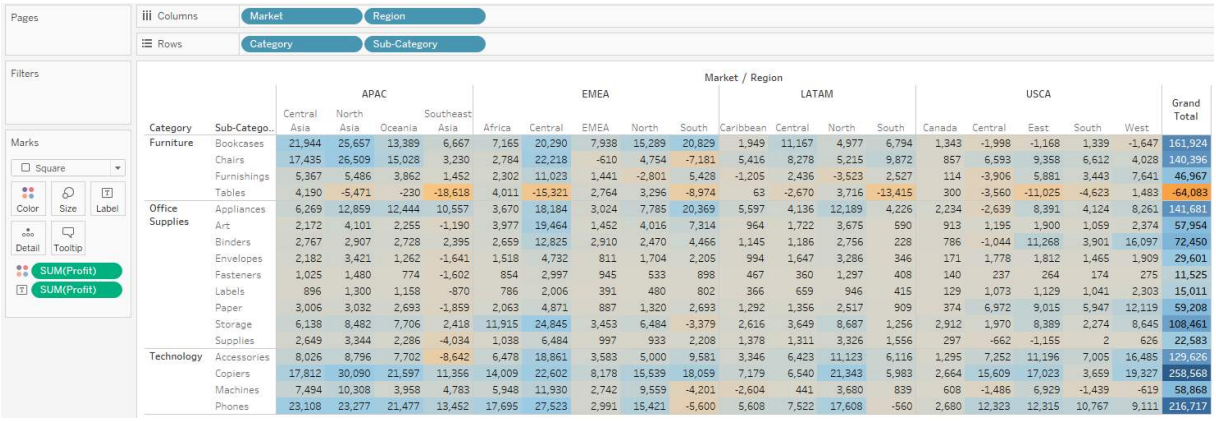
- ○ **Chairs**
- ○ **Fasteners**
- ○ **Copiers**
- ○ **Bookcases**

SUBMIT

5 Add row totals to see which sub-categories were the most and least profitable overall.

Expected result

You should see the following after completing this step.



Market / Region

Category	Sub-Catego..	APAC				EMEA					LATAM				USCA					Grand Total
		Central Asia	North Asia	Oceania	Southeast Asia	Africa	Central	EMEA	North	South	Caribbean	Central	North	South	Canada	Central	East	South	West	
Furniture	Bookcases	21,944	25,657	13,389	6,667	7,165	20,290	7,938	15,289	20,829	1,949	11,167	4,977	6,794	1,343	-1,998	-1,168	1,339	-1,647	161,924
	Chairs	17,435	26,509	15,028	3,230	2,784	22,218	-610	4,754	-7,181	5,416	8,278	5,215	9,872	857	6,593	9,358	6,612	4,028	140,396
	Furnishings	5,367	5,486	3,862	1,452	2,302	11,023	1,441	-2,801	5,428	-1,205	2,436	-3,523	2,527	114	-3,906	5,881	3,443	7,641	46,967
	Tables	4,190	-5,471	-230	-18,618	4,011	-15,321	2,764	3,296	-8,974	63	-2,670	3,716	-13,415	300	-3,560	-11,025	-4,623	1,483	-64,083
Office Supplies	Appliances	6,269	12,859	12,444	10,557	3,670	18,184	3,024	7,785	20,369	5,597	4,136	12,189	4,226	2,234	-2,639	8,391	4,124	8,261	141,681
	Art	2,172	4,101	2,255	-1,190	3,977	19,464	1,452	4,016	7,314	964	1,722	3,675	590	913	1,195	1,900	1,059	2,374	57,954
	Binders	2,767	2,907	2,728	2,395	2,659	12,825	2,910	2,470	4,466	1,145	1,186	2,756	228	786	-1,044	11,268	3,901	16,097	72,450
	Envelopes	2,182	3,421	1,262	-1,641	1,518	4,732	811	1,704	2,205	994	1,647	3,286	346	171	1,778	1,812	1,465	1,909	29,601
	Fasteners	1,025	1,480	774	-1,602	854	2,997	945	533	898	467	360	1,297	408	140	237	264	174	275	11,525
	Labels	896	1,300	1,158	-870	786	2,006	391	480	802	366	659	946	415	129	1,073	1,129	1,041	2,303	15,011
	Paper	3,006	3,032	2,693	-1,859	2,063	4,871	887	1,320	2,693	1,292	1,356	2,517	909	374	6,972	9,015	5,947	12,119	59,208
	Storage	6,138	8,482	7,706	2,418	11,915	24,845	3,453	6,484	-3,379	2,616	3,649	8,687	1,256	2,912	1,970	8,389	2,274	8,645	108,461
	Supplies	2,649	3,344	2,286	-4,034	1,038	6,484	997	933	2,208	1,378	1,311	3,326	1,556	297	-662	-1,155	2	626	22,583
Technology	Accessories	8,026	8,796	7,702	-8,642	6,478	18,861	3,583	5,000	9,581	3,346	6,423	11,123	6,116	1,295	7,252	11,196	7,005	16,485	129,626
	Copiers	17,812	30,090	21,597	11,356	14,009	22,602	8,178	15,539	18,059	7,179	6,540	21,343	5,983	2,664	15,609	17,023	3,659	19,327	258,568
	Machines	7,494	10,308	3,958	4,783	5,948	11,930	2,742	9,559	-4,201	-2,604	441	3,680	839	608	-1,486	6,929	-1,439	-619	58,868
	Phones	23,108	23,277	21,477	13,452	17,695	27,523	2,991	15,421	-5,600	5,608	7,522	17,608	-560	2,680	12,323	12,315	10,767	9,111	216,717

Hint

1. On the **Analysis** menu, point to **Totals**, and click **Show Row Grand Totals**.
2. On the **Marks** card, click **Color**, and then click **Edit Colors**.
3. In the **Edit Colors** dialog box, select **Include Totals**. To save the changes and close the dialog box, click **OK** in Tableau Desktop or, in web authoring, click the X.

Note that adding color to the **Totals** column dilutes all of the other colors in the highlight table.

To complete this section, use the table you just created to answer the following question about this data.

Knowledge check

Looking at the figures in the **Grand Total** column, which two products show the lowest **Profit** grand totals?

- ○ **Fasteners** and **Labels**
- ○ **Labels** and **Tables**
- ○ **Fasteners** and **Tables**
- ○ **Supplies** and **Fasteners**

SUBMIT

Nice job! You've created a highlight table that uses a diverging color palette to show your colleagues the highest and lowest profits by **Sub-category**, broken out by **Market** and **Region**. This enables them to identify the areas of data they're looking for. To give them an additional detail, you displayed the total profits overall by product sub-category.

Download the **file** below to view the solution to this activity.

FILE

Build a Highlight Table Solution.twbx

7.3 MB

Summary

Congratulations! Now you know how to create a highlight table that uses color to make the patterns and high and low values in your data stand out. Using highlight tables is a great way to make important data easier to find.

You've completed this module.
Click **Exit** to receive credit.

EXIT