

Introduction to Tableau

Welcome to Tableau

Hi, everyone.

I'm Ned and I'll be your instructor for this course.

Tableau is an invaluable tool.

One needs to learn on their journey to become a successful business intelligence analyst or data scientist.

The art of these professions is storytelling using data to tell stories and convince top management of the right course of action.

By completing this part of the program, you will know how to create charts and dashboards in tableaux.

This is an essential step on your way to a data scientist role.

Why use Tableau: Make your data make an impact

Tableau has grown to become one of the most popular business intelligence tools in the entire world.

It is A B I software that allows non technical users to visualize their data and work with it almost immediately lowering, know how barriers dramatically in the past.

Business analysts needed the help of it personnel who could assist them in gathering raw data and preprocessing it.

Only then could business analysts start working on the visualization of such data?

The advent of Tableau democratized this process and allowed B I analysts to be independent non-technical people can easily load data into the program and start playing with it.

Tableau's forte are meaningful intuitive visualizations and sometimes that's really valuable analysts are able to explore their data right away without spending too much time

on numbers which provide limited insights and instead focus on data that matters.

This is why we can confidently say that Tableau is an indispensable tool in the arsenal of most corporate business intelligence analysts, data analysts and data scientists.

Many people are uncertain about the difference between Tableau and spreadsheet tools like Excel.

And that's a reasonable doubt until we point out they serve different purposes using tableaux doesn't necessarily mean you can forget about Excel and vice versa while Excel is not as powerful or intuitive as tableau.

When it comes to data visualization, tableau is not optimal when you would like to use it as a data creation tool.

Although it has several database management functionalities, the program isn't the best solution when you would like to perform multiple operations with your data before you start analyzing it.

Moreover, tableau isn't great for multilayered calculations.

It is able to calculate in its own fields, but it shouldn't be used as a spreadsheet tool for multilayered calculations such as the preparation of a budget in Excel where tableaux surpasses the competition in data visualizations.

It is a very smart program that allows you to visualize data in a more powerful way compared to Excel.

So for example, when you work with geographical data, there is no way Excel could interpret the cells in your spreadsheet as a geographical location.

On the other hand, Tableau recognizes that and allows you to visualize such data and see how a variable is distributed geographically.

Moreover, tableaux allows you to combine several types of charts and build up meaningful

dashboards that are truly interactive and facilitate additional analysis.

Once you visualize your data, you can easily dig deeper and explore its granularity, finding the reason for unusual spikes or investigating certain trends.

Even novice tableau users would be able to save a significant amount of time if they transfer their pre designed existing Excel dashboards to tableau uploading new data and updating visuals is more rapid in Tableau. Therefore, we can agree that a competent analyst needs both Excel and tableaux.

Given that they serve different purposes.

Tableau is superior when it comes to visuals and dashboards and Excel is a spreadsheet tool we need in order to perform multilayered calculations in the same way, a combat soldier carries a rifle and a pistol at the same time and uses them under different circumstances.

A business analyst should know how to work with both Excel and tableaux and apply each of them when needed.

Let's download Tableau Public

Ok, guys, it is time to get started with Tableaux.

Let's type Tableau public in Google.

As you can see the first result, we have points to Tableau's website at [www dot tableau dot com](http://www.tableau.com).

I'll click on the link and this will direct me to the Tableau public Domain.

It shouldn't be too difficult to download Tableau from here if you are wondering why we searched for Tableau public.

The reason is quite trivial.

This is Tableau's free version if you don't have a paid subscription for Tableaux.

This is an excellent alternative.

You can practice with most of the program's functionalities and you don't have to pay

Tableau's annual fee.

So it is up to you.

You can either use Tableau public for free or pay for Tableau's desktop version.

Both options would allow you to follow along.

There are some issues when you want to integrate Tableau public and programming languages like R, Python and SQL to do that, you'll need Tableau desktop.

But for now, Tableau public will do just fine and allow us to practice at will all I have to do here is provide an email address.

And once I have done that, an exe file will download automatically on my computer.

Let's open the EC file.

This is the standard installation procedure you will find when installing any program out there.

I have to agree to Tableau's terms and conditions and then click install.

Once the installation starts, I simply have to wait.

And here we are, Tableau is installed on my PC. We are ready to start our journey.

Connecting data in Tableau

Right. Great.

Here is our freshly installed version of Tableaux.

I am sure you are anxious to create some fascinating visualizations.

So let's get started.

First off, we need to learn how to connect Tableau to the data source we will be working with.

There are two options, we can either create a connection to a file or a server.

Of course,

we'll choose one of the two depending on where the data is.

Let's connect Tableau to a Microsoft Excel file in general.

Every time we use a source file in one of the lectures, you will be able to find it in the supplemental resources section.

Just open your course curriculum and download the available files for that lesson.

See, OK, great.

I'll select the file called GDP data and under connections.

I can now see that Tableau opened the file.

Our source has three sheets, data, metadata, countries and metadata indicators.

What we usually have to do is choose the worksheet we'll need and drag into the upper part of the screen where drag sheets here is written.

Once we do that tableaux is going to activate the sheet we selected and provide us with a preview of the data we have inside the first two rows of the sheet are empty.

And hence, we see all of these null values tableaux is really smart and can often help us with similar issues.

As you can see here, the program suggests using its data interpreter functionality to clean the data.

All right, let's do that.

And voila the first two rows containing no values disappeared.

That's awesome.

In our next video, we'll open our first tableau worksheet and I'll be happy to introduce you to its structure.

This will do for now.

Thanks for watching.

Exploring Tableau's interface

So we've already connected our file to tableaux.

Now, in this lesson, we'll be creating our first sheet.

It's really easy to do and resembles how we create a sheet in Excel or pretty much

every other spreadsheet software.

All I have to do is click here and a new sheet will be created, right?

This is what a Tableau sheet looks like.

We can have as many of them as we want.

I can simply click on this little icon at the bottom and a new worksheet is added.

The other two icons which are next to it are for creating a new dashboard and a new story.

We'll deal with dashboards further in the course.

So we won't use these buttons for now.

OK.

Let's give some structure to what you are seeing here.

If this software is new to you, things can be a bit confusing.

So it will be best if we spend a few minutes.

The remainder of this lesson talking you through Tableau's interface.

First off, we have 10 different tabs on Tableau's default ribbon.

These are file data worksheet dashboard, story analysis map format window and help.

Let's quickly go through each of them.

As with most programs, the file tab contains certain functionalities related to opening, closing and saving files if you would like to, you can also exit tableau from here.

But why would you want to do that data?

On the other hand is where you will find functionalities related to the data source you are using here,

you can add a new data connection, replace an existing one or simply edit the data source of the worksheet you are working with.

Next, we have the worksheet tab.

It can be helpful when we want to create a new worksheet hide or show a charts, title caption summary and so on.

I am sure you noticed that we already created a

new sheet with the little icon we have at the bottom left corner of the sheet and we can do the same thing from the worksheet tab as well. Such repetition is common for most programs, functionalities available in the ribbon can be accessed in other ways too.

In fact, I rarely use the ribbon functionalities, but it is good to have an overview and be aware that they are there. OK?

Next, we have the dashboard and story tabs. As I said, we'll learn more about dashboards and stories later on.

In the course, the analysis tab is where you can tweak your visualization in terms of labels, show figures as a percentage of the total add trend lines, legends filters and more.

We'll explore many of these options later in the course for now, you can remember that here, we have some interesting functionalities related to the way we perform our analysis.

And some of the tools we'll incorporate in it map is a tab that is helpful when we use Tableau's geographic visualization capabilities. Pretty soon.

You will see that this is one of the most powerful and impressive tableau features. Of course, format can help us adjust the way our visualization appears from here.

We can modify its font, font size, axis, backgrounds, labels, size and so much more.

That's another tab containing plenty of useful functionalities.

We'll explore later windows and help are two of the standard tabs we find in most programs.

So I am not going to spend much time on them also because we are not going to use them throughout the course.

However, one thing we should mention is that

Tableau public has a nice and open community of users who will be able to help you and whose work you can look at if needed,

all users of Tableau public who save their work, make it publicly available.

Therefore, this can be a useful place where you can search for a given issue you need help with and see what comes up.

So if I click on community and search for geography, I'll be able to see the work other users have saved previously, right?

This is Tableau's ribbon

below the ribbon, we have several buttons that can be quite helpful.

The show start page button takes us to the screen we saw previously when we connected tableaux and our GDP data Excel file to get back to the sheet that was created earlier.

I'll click here.

I'm sure you know how to work with undo and redo.

So if I were to drag one of the fields here, I can go back and undo this section with undo.

Of course, see undone.

Most of the typical windows shortcuts can be used here as well as you probably know.

The shortcut for undo is control Z.

On the right, we have other useful buttons such as save,

allowing you to save the progress of your work.

Quite intuitively.

New data source opens the connect functionality we saw earlier.

The other buttons we have here are new worksheet, clears,

sheet swap rows and columns, sort and so on.

We'll explore many of these throughout the course for now,

it would be best if you simply gain an idea how various objects are positioned within Tableau's interface. OK.

On the left side of Tableau's screen,

we have two panes for data and analytics.

The data pane is quite important.

It shows us what data we've loaded and then

Tableau classifies the data into two

types: dimensions and measures. It puts it

slightly differently.

This is a distinction between categorical and numerical data.

The data in the dimensions field cannot be aggregated.

It is qualitative in nature.

Quite the opposite: measures can be aggregated and are quantitative in nature.

In the next few lessons, we'll learn how to work with these fields.

But for now, it would be nice if I just show you that we can drag dimensions and measures into the work area and use them to create our visualizations there.

The work area is where we'll create our visualizations, dashboards and stories and this is one way to create a chart.

I am sure you noticed that the columns and rows, part of the sheet, started showing us the variables we've added to the workspace area.

We'll explore this part of the interface in a separate video in a few lessons.

OK. Perfect.

What else do we have? The show me button on the right, which allows us to adjust the type of visualization we use.

It is a very cool feature because Tableau tells us what types of visualizations we can choose from as not all charts will be available depending on the data we have chosen to work with.

Once we decide we would like to switch to a different chart, all we need to do is select the respective type of chart and Tableau makes the adjustment for us neat, right?

And finally, here in the middle, we have three important sections,

pages, filters and marks, the pages shelf.

Lets you
break a view into a series of pages.
So you can better analyze how a specific field
affects the rest of the data in a view we'll
use the filter shelf when working with
filters and filtering our data.
The marks shelf on the other hand contains
functionalities related to coloring size
labels and so on.
This lesson was a quick overview of Tableau's
interface.
I am sure now you have a better idea of what
you see in front of you.
When you open the program in the lessons to
come, we'll continue to explore Tableau's
functionalities and you'll learn a ton about
each of the buttons we mentioned here as of now,
this will do.
Thanks for watching.

Let's create our first chart in Tableau!

All right, excellent.
It is time to continue our adventure in
Tableaux.
In this lesson, we'll create our first
visualization and it is going to be awesome
ready.
Let's get right into it.
Then as you can see the workspace area is empty
right now,
we've already loaded the GDP data file and we
can see that here.
Actually, let's open the GDP data XL file for a
second.
I want to make sure you are familiar with its
structure here.
It is we have a few blank rows but tableau took
care of them.
Then we have a column with country names, a
column indicating that this is
GDP data and several columns with GDP figures
for each of these
countries.

And this is the data sheet we are using right now. Perfect.

Let's go back to tableaux.

The way data is organized here is rather interesting.

Our attention should be focused on the dimensions and measures part of the screen. First off, we notice that tableau has been very smart and managed to organize our data.

Categorical variables are right here under dimensions.

While numerical data such as the country's actual GDP is under measures dimensions have been colored in blue and measures are in green. OK.

Another important remark we have to make is that some of the fields we see here are in italics and others aren't the distinction between the two is that tableau generates certain fields based on the data.

It finds when tableau generates its own fields such as the measure names field we see here. These are fields that are not contained in our original data source, But tableaux deems that these can be useful and creates them for us.

The same thing is true for latitude, longitude, number of records and measure values we see in green under measures.

The rest of the fields written without italics are ones we saw in the XL file.

We loaded country name, indicator name and the years from 2002 to

2016 where we have country's GDP figures. Good.

Another important detail I would like to mention is that tableaux adds an icon right next to each of the fields we have under dimensions and measures.

This is what allows us to understand how tableau reads the data.

The first field under dimensions is country

name and its icon is the globe.

Tableau recognizes that this field is related to actual countries and it is ready to help us out when we need to visualize such data.

If I click on the icon, I'll be able to see that this is a string and that its geographic role is of country region as it should be.

At the same time, the tiny ABC icon of the indicator name field shows us that this is a text value.

And in fact, when I click on it, I can see that this is a string but different to what we have for the country name field.

The geographic role of indicator name is none.

That's because this is purely a text value.

What about the year measures we have below?

Well, these are numerical values, right?

Therefore, it comes as no surprise that when we click on their icon,

designating numerical values, we will see these are numbers.

OK? Perfect.

Let's do the following.

I'll drag the country name field into the workspace area and boom

Tableau created a world map that shows us the location of each of the countries we have in our data source.

It is quite interesting to see that the field we see under columns and rows isn't country name but are artificially generated longitude and latitude fields.

At first, it may seem strange but then when you think about it,

it is intuitive.

Tableau understands country name is a geographical field.

This is why it will do much more than simply create a row or a column containing a list of the country we have in the Excel file.

No, the program is smarter than that.

It reads the country names and then creates the two fields,

longitude and latitude in order to map each country geographically and hence the beautiful map we have here.

Now, if I drag the year 2016 in the map, tableau will update the chart adding the 2016 GDP of each country. We can see that happen.

If we hover above each of the dots we have representing the countries on our map.

See the US GDP for 2016 was more than \$18 trillion while Canada's GDP was around \$1.5 trillion.

OK. Perfect.

Everything's good.

Our first visualization and Tableau is almost ready.

One last finishing touch I would like to add is to enlarge the bubbles a bit indicating how large a country's GDP is to do that.

I can work with the newly appeared sum 2016 pan on the right side of the screen, I'll click on its tiny arrow and we'll select edit sizes, the edit sizes, dialog box allows me to enlarge the bubbles we see in the visualization.

I think this will do let's click apply.

And as you see the bubbles in the visualization increased.

This makes it a bit easier to compare the GDP of different countries.

The final touch will be to edit the name of this visualization.

I'll double click here and simply type a title.

Anything is better than sheet one.

That's why I'll simply type GDP per country comparison.

And here we are, that's our first visualization in Tableau and we are just getting started

Tableau Functionalities

Creating a table

Ok, perfect.

In this lesson, we'll continue exploring some of Tableau's main features in particular, we'll learn how to create a table with data and add some custom fields.

The table we will create is going to be a pretty simple one, providing a monthly and yearly breakdown of a company's sales.

As you can see, our original data source contains a column called period.

This is where we have both yearly and monthly data.

The first four characters designate the year when a sale was made and then the last two contain information about the month when the sale occurred.

What I would like to do is split this information into two separate custom fields, year and month.

The way to do that is to go to the analysis tab and create a calculated field, right?

Once this dialog box opens, I'll type the name of the field I am creating which is year.

Then I'll use the left function in order to take the four leftmost symbols of the period field.

This is where we have the year when the sale occurred.

Left is a function.

Most of you are probably familiar with in Tableau.

It works in the exact same way as it does.

In Excel.

For example, in our next lesson, we'll pay extra attention to the different types of operations you can do to create custom fields.

OK?

Tableau recognizes we are writing the left

function and it helps us with autocomplete suggestions.

The left function needs two arguments from us a string which in this case

is the period field we have in our source sheet.

It is important to make sure that the period field, data type is a string otherwise tableau will show an error.

So I'll type period.

And as I do that, tableau manages to recognize I'm referring to the period field and allows me to select it right away.

The second component of the formula is the number of characters we would like to extract, we'll need four characters and that's what I'll write here,

close the brackets and our new field is ready.

If the period field was not of the string type, we would have had problems because left is a function that requires us to use strings, I'll change the data type of the period field.

And as soon as I do tableaux shows us a warning sign next to the newly generated field year.

And it doesn't allow us to drag this field into the workspace area.

Basically, we can't use it. OK.

I'll change the type of data of the period field back to string and the issue will be resolved.

Now, I can easily drag the year field into the workspace area.

See, perfect.

The other field I would like to create is month.

And in order to do that,

I'll use the right function again, we'll need to go to analysis and create a calculated field.

First, we'll assign it with a name months and then I'll type in the right function following the exact same procedure as before the string we'll need is the same period.

and the number of characters we'll need is two,

given that months are the two rightmost characters within the period field. Excellent.

Now that we have our second field months, let's add it right next to years in the workspace area.

I can do that in two ways.

I can either drag the field into the workspace area and place it right next to the year's information or alternatively drag the month field right next to the year's field in the rows.

Part of the screen, the output is the same.

Now, we should create a new calculated field and name it number of records in the box below.

We will just type the number one and press. OK?

This field represents a simple count of the rows we have in our source data.

OK? Great.

We've managed to create a nice table that groups all 12 months of 2016 and all 12 months of 2017.

I'll simply insert the number of records field we just created and voil.

This is a nice table that shows us the breakdown of the company's total number of sales for each month in 2016 and 2017. Awesome. Right.

Creating custom fields

We already know how to create custom fields.

We did it two times in our previous lesson, creating the years and months fields.

In this lesson,

we'll spend some time describing some of the other ways you can transform your source data and create custom fields.

Remember, we shouldn't go too far with these as Tableau's main purpose is visualization and not data creation or modeling.

However, sometimes it can be really handy to

perform certain manipulations once we've loaded our data into tableaux and we need a certain type of analysis.

OK.

Here we go.

The typical Tableau operators you'll need to remember are plus for addition, minus for subtraction star for multiplication forward slash for division and carat for elevation alongside these, you'll probably need comparison operators such as equal, higher, then lower than higher or equal and different.

Then the logical functions available in Tableau are like the ones we have in Excel and or and not a lot of the

functions and symbols used in Excel can be used when creating a calculated field.

So for example, some of the most commonly used functions are some for some average for average min and max allowing you to find the minimum and maximum values within a range.

And ABS returning the absolute value of a number.

And we already saw the text functions left and right.

They allow us to extract a leftmost and a right.

Most number of characters within a string we've specified besides left and right.

We can also use the typical text functions available in Excel Mid providing us characters that are in the middle of a text string, upper and lower allowing us to either convert it to all upper case characters or convert it to all lower case characters.

This was a nice recap of the types of operators we can use in order to create custom fields in tableaux.

For more information on this topic, we'll add a downloadable file attached to this

lesson.

Thanks for watching.

Creating a custom field and adding calculations to a table

Right.

So we are ready to go back to Tableaux and perform a few additional operations with the table we created earlier right now.

It shows us the number of units sold by the firm in each month of 2016 and 2017.

Let's change this measure.

What I would like it to show us is the revenue the company generated during each of these periods.

How can I do that?

Well, it's fairly easy.

Our source data contains information about price and tableaux counted.

The number of units sold each row shows us a single car sale, right?

Therefore, if we multiply the price field and the auto generated number of records field, we would obtain revenues.

Do you agree?

Ok, good.

Let's do that.

We already know how to create a calculated field.

I'll name it revenue and we'll take advantage of Tableau's autocomplete suggestions by multiplying price and number of records.

See as we said in our previous lesson, we can use the star operator to carry out a multiplication.

One very useful feature you have probably noticed is that at the bottom of the screen tableau tells us whether the calculation we've entered is a valid one or not.

Right now, my calculation is valid if I remove a few symbols tableau would indicate that the calculation contains errors.

This is a good guiding light when we create a calculation, right.

So this is our revenue field,
we can easily substitute the number of records
data in the table with it.

All I have to do is drag the revenue field and
position it over the number of records data
tableau replaces the two fields. Perfect.

An important metric contained in our source
data is gross profit.

By definition, revenue minus cogs equals gross
profit.

Currently, we have revenue and gross profit.
Let's calculate cogs as the difference between
the two.

That's easy to do.

All we have to do is use the minus operator.

Nice.

Let's order our table in the following way.
First we'll have revenue then cogs and finally
gross profit.

I can do that by dragging and dropping the
three fields within the table.

Please note that their values appear in the
measure values card on the left side of the
workspace area, we can change their order
either from here or directly inside the table.

It's up to you.

One more thing you have probably noticed the
measure names field which appeared in the
columns section.

This is an auto generated field tableau uses in
order to form our table and separate the
names of different measures.

If we were to remove it from the column section,
the table will lose its shape and all three
measures will be put together.

Let's press control and Z and undo this action.

OK. Excellent.

In our next lesson, we'll learn how to add
totals and subtotals to our tables in tableaux.

This will do for now.

Thanks for watching.

Adding totals and subtotals

Most executives and by most, I mean, all of them prefer receiving tables that contain totals and subtotals.

This makes it easier for them and helps them digest information in a faster way.

In this lesson, we will learn how to add totals and subtotals to our tableau tables.

That's nice because the table we have been working on in the last few videos doesn't contain totals for 2016 and 2017.

We'll add them in this video.

That's fairly easy to do.

I'll go to analysis then totals and we'll select show column, grand totals.

The totals we just added are for the entire period 2016 and 2017.

That's not really useful.

Is it whenever a person is interested in a company's sales or gross profit, they want to know how much it made in a specific year and whether it performed better than the year before a company will also want to know how its year's sales compare to other companies.

So I'll go to analysis totals and unclick the show column, grand totals to remove the total.

We just added what I can do differently.

The second time around is opt for add all subtotals.

And this will give me the total figures for 2016 and 2017 separately.

Quite nice.

Right now, we can read the table easily the fictitious numbers we see here, help us compare 2016 and 2017 and give us a good idea of what the actual sales were for that period.

In our next lesson, we'll add percentage, gross margin to our table.

Thanks for watching.

Adding a custom calculation

Ok, excellent.

We're doing good.

We've seen quite a few interesting tableau tools so far and we'll continue to do so during this lesson as well.

Our table is almost ready.

We have revenue cogs and gross profit.

Now that I think about it, one thing we should probably add is a gross margin calculation right next to the gross profit figures.

Gross margin is useful because it allows us to see what portion of revenues were converted into gross profit once we have considered the cost of goods sold.

Right.

Let's add a new calculated field.

I'll name it GM percent.

All we have to do is divide gross profits by revenue, right?

And we already know how to do that. Ok.

Here we are.

We've calculated a new field.

Let's add it to the table.

I'll insert it in the measure values card there.

I've added the new field right next to gross profit.

But it looks strange, doesn't it?

If we divide gross profit by revenues, we would usually expect a number in the region of 10, 2030 or maybe 50%.

Certainly not 1000.

What is going on here when I divide 71 million by 244 million, which is what we have in January.

I obtain 29%.

Approximately.

There are two possible explanations.

Either tableau miscalculated, the simple division we asked it to perform or our formula is not 100%. OK.

It's most likely us and not the computer, right.
I'll take out the GM percent field from the measure values box and we'll edit the calculated field from here.
What we forgot to do is type sum around the two variables.
If we don't sum the variables, we are not dividing their total figures for each month.
Let's adjust our calculated field in this way and see what happens.
OK?
This is a column with numbers that look like zeros, but perhaps these are percentage values.
Let's change the way the GM percent column is displayed to do that.
I'll simply click on the GM percent variable in the measure values card and select the format option.
We have quite a few options available here.
So I'll simply select a percentage format with one decimal place.
Voila.
Our table is ready in our next lesson.
We'll add a filter that would allow us to choose whether to see both 2016 and 2017 values or just one at a time.
See you there.

Inserting a filter

One of the most interesting options available in tableaux is adding a filter to the visualization you are working on in this lesson, we'll learn how to do that.
Of course, we'll add a filter to our table from a user standpoint.
The only field which makes sense to be filtered in this table is the year field.
A person could be interested in seeing numbers for 2016 or 2017 only.
For example.
So what I'll do is select the analysis tab and

then select filters,
choosing the year field.
As we had already decided,
we would like to create a filter for years.
And as we do that, a filter appears on the
right side of our workspace area.
Now, we can easily hide 2017.
For example, I'll simply untick its
value and everything related to 2017 disappears
from the sheet
pretty cool.
Right?
Of course, we can do the same with 2016.
I'll select 2017 and until 2016.
And here we are.
When we click on the tiny arrow which is in the
upper right corner of the filter pane,
we find plenty of options that allow us to
adjust the filter we've created.
For example, we can change its appearance to
single value list,
representing radio buttons have a filter as a
drop down menu,
a multiple values list and so on and so forth.
We can easily change the filters formatting by
selecting format filters.
Or alternatively, we change the filters title
by clicking on the edit title button.
What else can we do?
Oh, yes.
We can choose whether to apply the filter to
the current working sheet only or to all
worksheets in the tableau file we are working
with.
And that's really useful when working with
several interrelated sheets. OK.
This was our short introduction to filters in
tableaux.
This will do for now.
Thanks for watching.

Working with joins in Tableau

One of the most important aspects of your work in tableaux is the data source you are using to perform analysis quite often, the data will be stored in multiple locations and hence, you will have to deal with a number of data sources which live in different environments. Nevertheless, you are going to want to use all of the data available to you and run analysis on everything together.

The way we merge multiple data sources is by using joins for those of you who have already followed our program and especially our SQL videos you'll be familiar with what follows in this video.

So feel free to skip or continue watching as a refresher for the rest.

Please follow along when we want to perform cross data table joins.

We want to combine two or more data tables to create a unique database.

How do we join separate data tables?

Well, there are a few ways to do that.

We can create an inner, outer left or a right joint.

Let's open an Excel file to demonstrate a bit better what each type of joint represents.

Here, we have two very simple tables.

The first one shows us the age of three basketball players and the second one shows us the salary of basketball players.

Please note that the two tables are different due to their last rows.

We have lebron James in the first one and Kyrie Irving in the second.

Ok, let's say we would like to run some analysis and use the data available in both tables.

Therefore, as described earlier, we have to use joints.

But how do we do that?

We can easily see that the two tables have one column in common.

The basketball player column, this column will serve as a key.

When we put together the information from both tables, a left join would mean that the left column of the first table will lead the way we will use it to create a table containing age and salary information about the three players we see here.

Whenever we find one of these players to the right, we'll add their salary in the new table.

As you can see here if their name is not present to the right,

which is the case with lebron james' salary, we will have a null value in the table.

If a player's name is not present in the left column of the first table,

we will not include any information about them as this is a left join and any rows which are not present in the key field of the left table are omitted in the new table.

A right join functions.

In the same way.

However, this time, the left column of the second table leads the way Kyrie

Irving replaces lebron James who is not present in the left table.

Hence, the only missing value would be Kyrie Irving's age.

Given that the only information we have about him is in the right table.

The case when we are interested in the intersection of the two tables only is called an inner join.

This is when we create a table that contains rows where we have an exact match between the key fields we are joining the two tables with in our case, basketball player.

This time, the newly created table contains two rows, only, both tables contain information about these players.

Hence, this is an inner join.

An outer join would be the opposite case we add all rows of the two tables regardless of whether there is a match in the key field we are linking with.

When there isn't, we would have null values, which is the case with both lebron James and Kyrie Irving.

Here, these are the main principles you need to understand when deciding whether to create a left, right,

inner or outer join in tableaux depending on your needs.

And on the specific case you are working on, you will be able to apply one of these structures and join your data.

The Tableau Exercise

Introduction to the exercise

Hello and welcome back.

Now that we are nearly finished with our introduction to Tableau.

It is time to start creating great looking charts and use them to build a complete dashboard.

This is way more exciting than getting acquainted with Tableau's interface.

Isn't it to do that?

We'll solve a complete real life exercise and each lesson will build upon the previous one.

Sounds great. Right.

All right.

Then let's get started.

Here's the Excel data we'll use.

It was provided by a company that has produced several audio books and has been selling them at an online marketplace.

One of the main components of that marketplace is reviews.

So we have two files, one about sales and another one containing information about

reviews.

Customers left for each audio book,
both files contain the date when a purchase or
a review occurred.

It will be great if we manage to produce a
table that takes advantage of both types of
data we have when a person bought an audiobook
and when and with which rating a
person left a review.

If we manage to do that, we'll be able to
create several different charts in Tableau that
would allow us to learn if the number of
reviews the company receives has been growing.
How did the average review score change over
time?

What is the percentage breakdown between 10
star, nine star,
eight star and other types of reviews?

What percentage of people acquiring an
audiobook?

Leave a review, visualize the correlation
between audiobook sales and number of
reviews or perhaps visualize the correlation
between average review score and sales
in the lessons to come.

You'll see how to do all of that.

Stay tuned and thanks for watching.

Let's create a dashboard - Visualizing the three charts we want to create

All right, very good.

Let's take a look at the following picture.

This is where we want to get by the end of our
exercise.

Our goal is to create a dashboard containing
three charts,

a chart showing us the number of reviews with a
second axis measuring the monthly average score.

Then we would like to create a pie chart
showing us the percentage of reviews each
audiobook obtained.

For example, 50% audiobook,

1 25% audiobook, 2 10% audiobook three and so
on.

And finally, we would like to create a chart that gives us information about the ratio between reviews left and the number of audiobook purchases.

Such a visualization would help us understand what portion of people buying an audiobook, listen to it and then leave a review. Ok.

These three charts will be the foundation of the dashboard we will create later on.

And I've added a note on the side showing us that once the dashboard is ready, we will be able to look at the aggregate data or use a filter to monitor the performance of individual audio books.

Sounds exciting, right?

As a side note here, I would like to add that in general,

it is a good practice to sit down and design your dashboards before you start working in tableaux.

This allows you to have a predefined idea of what you would like to achieve and to check whether you are able to do that at the end.

Moreover, and what is probably most important, this allows you to think what visualizations make sense from a business perspective.

OK, great.

Let's get right into it in our next lesson.

Using Joins in Tableau

As usual.

The first thing we need to do when starting a new project is load our data.

Our two source files are audiobook reviews and audiobook sales.

Let's connect them to Tableau.

Here's the audio book reviews file in the same folder.

We also have the audiobook sales file.

We'll need both.

So I'll click on add and we'll load the other files too in order to be able to use the information of both tables at the same time,

we'll have to combine them somehow to do that.

We must double click at the audiobook sales gray button that is in front of us.

Then we can drag the audiobook reviews table from the sheets field on the left.

We've just created the join.

We need excellent what we want to obtain by doing that is a unique table containing information about all transactions for all audio books and the respective reviews left by clients whenever they chose to do so, the transaction ID column is the perfect link between the two files as it is available in both.

And it could serve as a common field based on which we could link the two tables together.

So one of the main aspects we'll explore in this lesson is how to create a connection between two tables in tableaux.

Please remember that we will distinguish the terms data connection and table connection.

Table connection is performed by functionalities like joining or blending.

It refers to combining data from two or more data sources.

Data connection instead represents a single data source connection between Tableau and a data source such as an Excel workbook or an SQL database.

When we imported the second file Tableau did some work for us in the background and created a connection between the two files.

The symbol you see here is an indication we've created an inner join.

Technically speaking, when creating a join, Tableau sends a query to the database, the joint is implemented on the relevant tables at the database level and the output of the operation is brought back to Tableau where it is ready to be used for analysis.

And inner join means that the two tables we've added have a field in common and we can combine them using that field.

Let me hover my mouse over the symbol tableau indicates that it has created an inner join using the parameter audiobook name.

We don't want that.

We want to link the two tables according to the transaction id parameter.

As our analysis will be focused on user sales and reviews.

So I'll click on the inner join symbol and we'll open the join menu first off.

Let me substitute the field we use.

In order to create a connection between the two tables, I would like to create a connection using the transaction ID field.

And here we are, here's a preview of the table we've created through an inner join and transaction ID as the primary key as shown in the diagram.

When we create an inner join between the two tables, we consider their intersection the situation where the primary key is found in both tables.

To give you an example, if a person who has a given transaction ID purchased a course but did not leave a review, then they won't be included in this table.

And inner join would require users who have purchased a course to have left a rating and both the date of purchase and the date when the rating was posted to be known.

Basically, it contains only the rows in which we have a transaction ID, a date of purchase, a date of review, a review rating and information regarding which was the audio book that was purchased and rated.

For example, all the cases when a person bought an audio book but did not rate, it are not considered.

Do you think this information is important?

Do we want to be able to understand how reviews impacted sales and whether we can see a pattern in total purchases with respect to

reviews?

Of course, we'll need this information.

And if we use an inner join, we are not going to have it.

Therefore, we'll need a different type of join.

One that includes the information about purchases and people who did not rate an audio book.

So looking at the tiny diagram we have here, I am going to select a left join.

Given that the audiobook sales file is on the left side.

We want to have a table that contains information regarding audiobook purchases, all of the audiobook purchases.

And the case is when people who bought these books provided a rating and a left join is more suitable than an inner join in this case.

Ok, great.

In our next lesson, we'll make a check to see whether the data we've connected to Tableau is correct.

This will do for now.

Performing a Numbers Check - Attempt #1

Right.

Our pace is excellent.

In this lesson, we would like to make sure that the data we've loaded through a join is truly representative of the figures we have in the two source files, right?

Let's open sheet one and do a few checks.

First off, I would like to see how many sales transactions were registered in total.

Let's drag the number of records field into the workspace area.

Tableau is really quick and tells us that there are 110,570 rows with transaction ID information.

These are the actual sales of audio books that occurred throughout the entire period of

analysis.

A quick look into the sales Excel file shows us that this number is precisely the one we should have.

Ok, let's change the format of the date of purchase field to date, shall we?

I like it much better up here among the dimensions fields and with a calendar icon right next to it, suggesting this is a date field.

Next, I'll test for the number of ratings we have in the reviews file.

I'll simply drop the ratings field into the workspace area and the result we have is 96,897 which is too high.

Why is that?

Well, we are summing not counting, this is the actual sum of all ratings that have been left by students.

We want to count the number of ratings instead.

Here, that's much better.

People who bought our audio books left a total of 10,798 ratings.

Let's make sure that this number is fine as well.

Ok, here it is very well.

One final check and we are good to go.

Let's add the date of purchase field to the columns of our workspace.

Moreover, I'll increase the level of granularity of our data and we'll opt for a monthly breakdown.

That's something we can do fairly easily and is one of Tableau's strongest features.

Granularity is a term that you will encounter quite often while working with Tableau.

It is very important to understand what it is used for.

In fact, it simply refers to the following the level of detail in a field of a data set.

In our example, this means taking a daily, weekly, monthly or yearly

breakdown are all different levels of granularity of the date of purchase field of the audiobook sales data source.

Here's the monthly breakdown of reviews.

Wait, there is something strange according to Tableau, we did not receive any reviews in December 2017.

However, I do know for a fact that we did.

Here's the proof in our Excel file.

What happened?

Tableau gets confused pretty easily when we join the data and then use a dimension such as purchase date from the sales file and another field such as rating from the reviews file.

For some reason, the date fields of the two tables we joined do not match up with each other correctly.

Whenever you experience such issues, it is best to use data blending and alternative to tableau joints.

That's precisely what we will do in our next lesson.

Thanks for watching.

Blending Data in Tableau

Data blending is a method of combining data that supplements a table of data from one data source with columns of data from another data source.

In our case, we would combine the sales data from the audiobook sales file with the ratings column from the audiobook reviews file.

How does blending differ from joining?

You can think of a data blend as a specific type of left joint that is preferable or necessary to be applied depending on various conditions.

Sometimes using a joint will do a perfect job while in other situations blending will either deliver better or quicker results or be the only solution.

Moreover joining data is something you do

manually.

Whereas data blending is a functionality that tableau implements automatically while you are working on your sheet.

This makes it a more intuitive feature to use provided that the following conditions are met. Both data tables are separate data sources. There is a field that serves as the connection between them and would allow us to carry out queries that leverage information from both tables.

So one of the preliminary basic requirements to blend data in tableau is to have a common field creating the connection between the two data tables.

From a technical perspective.

What blending does is take separate query results from each data source and aggregate them in the view that is in Tableau only then it will connect and join the query results on the same common field which should contain information of the same data type.

This is different from the case when you are using a joint where the aggregation is happening at the database level and just the output of the joint is being brought back to tableau when blending, the aggregation occurs in tableau.

So what are the benefits of blending data?

It turns out that joining or blending can bring different results.

And here is the tricky part.

If you join two data tables containing duplicate values that are not aggregated properly in while doing some preliminary work on the data, you will obtain an artificially inflated data set in tableaux blending solves that problem automatically tableau will consider the level of granularity you have chosen in the view in other words, in your sheet and will combine the data sources with aggregated fields directly.

OK?

I think we are ready to create an actual blend in tableaux.

Let's open the audiobook sales file first.

Then once I've opened the file, I'll open a sheet and click on new data source from the data tab.

This is how we will create a new data connection and we load both files at the same time without creating a joint.

As we can see here, both files are open in Tableau to make sure we've created a blend.

I can open the edit relationships, dialogue box and see whether tableaux has created a connection between the two files.

In our case, things are pretty straightforward because Tableau immediately recognized that the two files contain columns with the same name, transaction ID.

The primary data source is the audiobook sales file which is excellent.

This means it would represent the left table of the left join performed while blending the data tableaux.

Or alternatively, the view will use all rows from audiobook sales audiobook review instead acts as a secondary data source, the right table.

Therefore, while blending tableau will use the aggregated rows from this data source based on the dimension of the common fields.

For the sake of exercise.

Let's select the custom relationship radio button and choose not one but two different fields that serve as the connection between the two files.

This is similar to having a two column, primary key and a two column foreign key in SQL. I'll click on add

and then would like to connect the date of review and the date of purchase.

Hm I can't see the date of purchase in here.

What is the reason?

Well, Tableau didn't recognize that this is a dimension and added this field among measures.

Let's change its data type and open the edit relationships window and select to add a new custom relationship which connects the two files based on the date of purchase and on review date.

And that's how we edit the relationship tableaux created.

Right?

Let's switch back to the automatic connection tableau created in our next video.

We'll test whether blending solved the problem we experienced earlier.

Hopefully we will be able to combine sales and reviews without any problems.

Stay tuned.

Performing a Numbers Check - Attempt #2

Now that we have created a blend, we can go ahead and make a quick check.

That would allow us to see if the numbers we will work with.

Look fine this time.

Let's start with the number of sales transactions.

First, I'll simply drag the measure values field into the workspace area.

110,570.

Precisely what we expected. Good.

The number of sales transactions is the one we expected.

Next, I'll remove this field and open the audiobook reviews data to check the number of ratings we have,

I'll simply drag and drop the rating field.

But this time tableaux displays an error.

It tells us that fields cannot be used from the audiobook reviews data source because there is no relationship to the primary data source.

We find out our data is not blended yet to do that.

We have to click on the tiny link icon right next to transaction id and choose this to be our linking field.

The error we observed previously is not going to appear again because our two data sources are properly linked now. Great.

This is a field that shouldn't be summed but counted as we are interested in the number of ratings left by students and not by the total sum of their ratings.

10,798.

Again, the number we expected to see it's time for the true test.

These numbers were ok.

The last time too, remember, let's plot the number of reviews and the date of purchase field from the audiobook sales file.

All I have to do is add date of purchase in columns and then choose a monthly breakdown instead of annual breakdown.

Oh, no, December 2017 is empty again.

What can we do now?

Blending doesn't work either.

Let's have some faith.

We'll figure it out.

I'll go to data and open the edit relationships menu here,

we can choose the primary data source which should be audiobook sales and the fields that serve as a link between the two files.

Let's opt for a custom selection and add the following fields.

First, I'll link the year of review date with the year of purchase date and the month of review date with the month of purchase date.

Once we are ready, we can click.

Ok, and see if the situation changed the same.

Check the count of number of reviews with respect to purchasing date will show us whether we've managed to solve the problem by using a different linking field and it appears that it

has here's a timeline that shows the number of ratings left each month.

We have 653 reviews for December, not zero.

And that's excellent. Wow.

It took us a while,

but we figured it out.

We had to edit relationships and adjust the field that serves as a link between the two files.

Otherwise we would have been left with a wrong graph.

And that would be unacceptable in a professional environment as wrong visualizations lead to wrong business insights in our next lesson.

We'll create the first chart for our dashboard.

Thanks for watching.

First chart

Ok, excellent.

We are ready to start with the first chart that will be inserted in our dashboard.

Therefore, I'll rename the worksheet's name to chart one.

Ok, good.

Let's add the date of review information into columns and this is where we will be able to see the timing of purchases and reviews.

As usual,

we are interested in a breakdown by months.

So I'll select month, the workspace area shows us that review dates

range from February 2017 to February 2018, which

is what we expected to see.

Let's insert some data, shall we first?

I'll add the number of ratings using the count function.

Everything's fine and we have data for December 2017.

So we can forget about that problem.

According to our initial plan, this will be a chart that shows the number of reviews and the

average review score per month displayed on a secondary axis.

So I'll add the rating field to rose for the second time.

But this time we want the average of these numbers and we would like to create a dual axis.

Excellent.

Obviously, we will have to fine tune the axis scale.

A bit as right now, the chart doesn't show a match.

I'll simply double click and choose a fixed range starting from eight and going all the way up to 10,

which is the maximum review score we can have.

However, right now, the two charts overlap in a strange way and we are unable to see their trends.

So I'll increase the size of the axis to 12 and we'll change the full color of both variables, number of ratings and average ratings.

That's easy to do.

I need to select one of the two variables and then click on the color button under marks.

Once we've opened the edit colors menu, we can choose which variables color we would like to change to a color.

We like better.

I like yellow and blue. Awesome.

I'm not really a fan of opacity which adds a transparency effect and sort of mixes the colors we have in our chart.

Therefore, I'll opt for 100% opacity for both variables.

See the chart looks nicer.

Let's edit its axis again.

That's something which is quite easy to do.

We have to double click on a specific axis and type the axis title we would like to have,

I'll change counter rating to number of ratings, month of review date, two month.

And I believe the average rating doesn't need

to be changed.

Very good.

This is our first chart.

Does it give us any meaningful information?

Well, yes, I believe it does.

First off, we can see that the number of reviews left by people has been increasing, which is pretty great.

The average review score is almost nine and sometimes even higher than nine, which is a pretty high score but should be interpreted.

And compared with the rest of the market.

Moreover, we don't see a dependence between number of reviews and average ratings, which means that average review scores are not influenced by the number of people leaving reviews.

All of this is quite interesting.

Let's keep up the good work we have been doing in our next lesson when we will create the second chart for our dashboard.

Thanks for watching.

Second chart

Hi and welcome back in this video.

We'll create the second chart which will be part of our dashboard a pie chart showing the percentage of the total reviews that each audiobook obtained.

The number of reviews is quite important in the marketplace we are studying and this is the reason why we are interested in finding out which audiobooks collected more reviews and alternative visualization would be a pie chart showing us the percentage of people who purchased a given audio book. Ok.

Given that we know what we would like to accomplish things should be easier, right?

I'll add the rating field to the workspace area.

The number we obtained is the sum for all ratings.

Let's use count for this measure. Perfect.

The total number of reviews is
10,798.

And we know for a fact that that is true.

Let's go ahead and add the audiobook names
dimension above the rating field, shall we?

This creates a breakdown by audiobook exactly
what we want to have.

Now, I can simply select the pie chart icon
within the show me functionality and I'll
create a pie chart, a really tiny one but still
a pie chart to increase the charts
size.

I can simply click anywhere in the workspace
area, hold the control key and then use the
arrow keys.

If I press control and up the chart grows
vertically while control and right
arrow increases the charts size horizontally,
the opposite is true as well.

We can decrease the charts size by pressing
control and down key or control and left
arrow. Awesome.

What else we need labels?

Right?

Otherwise, it is difficult to gain an idea what
portion of overall reviews a specific
audiobook accounted for.

I'll drag the rating field in label and a
number of reviews appears right next to each
audio book.

Again, we need the count of ratings and not the
sum.

Ok.

But how do we display these as a percentage?

That's not that difficult.

Actually, all I have to do is go to analysis,
select percentage of and then click on table.

Boom.

Here we are.

These are the percentages each audiobook
accounted for among the total number of reviews,
the pie charts and the labels we added shows us
that audio books, one and two accounted for

more than 50% of the total number of reviews the company received.

Very interesting.

The business relies greatly on these best sellers.

In our next lesson.

We'll create the third and final chart that would allow us to complete our initial plan and obtain the dashboard we intended from the very beginning

Third Chart

Ok, we are almost there ready for chart number three.

I hope you are.

Here we go.

In this lesson.

We would like to create a chart that gives us information about the ratio between reviews left and the number of audiobook purchases in a given month.

An important KP I showing us whether people who buy audiobooks leave reviews to do that.

We'll need to create a few calculated fields.

First, let's create a field which counts the number of ratings,

not the sum of all ratings, but their count.

It will be much easier if we create this field and use it going forward.

The name of the field we are creating is number of ratings and I simply need to use the count function.

The next calculated field I would like to create is number of purchases.

Let's change the data source.

We've selected to audiobook sales here.

I will create a field called number of purchases which will contain the number of audiobook sales the company made.

How do I count the number of purchases?

Well, the transaction ID code is unique, right?

If we count it, we should obtain the number of sales transactions which is precisely what we

are looking for.

Ok, good.

We are almost ready now, we can create the last calculated field which will be the ratio between reviews and new purchases.

Let's do that.

It is a fairly easy task given that we've already created the number of reviews and the number of purchases all we have to do is divide the two figures and we'll obtain the measure we want to plot from the very beginning.

Let's add it to the rows of our visualization.

The result is a pretty nice bar chart which is a bit too large but still looks meaningful.

It appears that the ratio of ratings to new students was significantly lower in November 2017 and way higher the month before three times lower to be precise.

I am sure the firm's Business intelligence team would want to have a look at that and analyze what the reason is for this.

Let's quickly edit the title of the horizontal axis to month and save our work in our next lesson.

We'll organize the charts we created in a dashboard.

Stay tuned and thanks for watching.

Creating and Formatting a Dashboard

Congratulations on making it this far in our Tableau training.

Let's take a moment to see how much we have covered to this point.

We started off by learning when and how Tableau can be useful in corporate decision making and learned how to install Tableau's free version Tableau public.

We then learned how to connect data to Tableau and what we can do with the different parts of the Tableau interface.

Not long after we created your first Tableau chart, we learned how to duplicate sheets and how to create tables.

Then we learned how to create custom fields in order to manipulate our data within tableau easily.

In addition, we learned how to add totals and sub totals to our tables and how to work with filters.

We explored functionalities allowing us to work with multiple data sources such as joins and data blending.

And most recently, we created three meaningful charts.

Now we are going to build our dashboard which will be the last piece of the puzzle really.

It will be interesting to put all three charts right next to each other and see the type of insights we can get by analyzing them in one place.

OK.

Let's get right into it to create a new dashboard.

I'll click on the tiny icon we have here.

See when we hover the mouse over it, it starts displaying new dashboard.

Once the dashboard has been created, my first task would be to modify its size right now.

It is a bit too small, isn't it?

I can adjust the size settings from the left part of the dashboard screen.

Let's work with a range that is 1000 pixels wide and has a height of 800 pixels.

I hope you are watching this video from a large screen.

OK.

Let's drag and drop the three charts.

All I have to do is drag them and place each chart where I want it.

Tableau is quite smart and manages to find space and guesses what we want to do when we position the cursor above the dashboard area.

Of course, there are a few things that need to be adjusted.

I'll remove the legends.

We don't need leaving the audiobooks legend.

Only moreover, I would like to place the audiobook legend below the pie chart. It belongs to this way.

What we are doing will be much clearer. I'll simply press on the legend and then grab the part you see here, dragging it below the pie chart. Let's resize a bit to get rid of the arrows. Perfect.

Now, to remove the arrows of the pie chart and fit it in its allocated space without any problems we'll need to adjust its size from the chart to sheet.

Let's go there and reduce the pie charts size just a tiny bit horizontally and vertically and then we can go back to the dashboard sheet and see what happened.

Ok, great.

The arrows disappeared.

We are one step closer.

Let's change the chart titles a bit because frankly, they don't mean that much.

We should have done it earlier, but better late than never.

Right.

A good title for the first chart would be number of reviews and average rating.

Also, I would like to adjust its font size to 11 and put the text in bold.

We'll do the same for the other charts too in order to be consistent, which is quite important.

When building a dashboard, the title of the pie chart would be number of reviews by audiobook, as promised, I'll apply a font size of 11 and a bold text effect.

And lastly, the title of the third chart will be ratio of reviews to sales very well.

Our dashboard is almost ready in our next lesson.

I will show you how we can add a filter and

make this a truly interactive tool that allows us to dig deeper and filter all three charts. Contemporaneously.

Adding Interactive Filters for Improved Analysis

Ok, guys, we are almost there.

Our goal in this lesson would be to add a filter to our data and be able to look at the dashboard and choose which audio books we would like to analyze and simply select them from the filter.

Sounds useful, right?

The data we see here is quite meaningful and shows us some important trends.

However, actionable decisions will probably have to be made at the audiobook level and will need to be specific for each of the audiobooks our firm sells addressing the story we see here.

All right, let's add a filter to chart number two, the pie chart.

I'll simply click on the tiny arrow in its right corner containing more options and we'll apply audiobook name as a filter again.

We'll have to adjust the charts, size and position in the dashboard a bit to remove the arrows very well.

I think this will do.

Now when I use the filter, all changes that occur are for the pie chart, only the other two charts remain intact as the filter we just added has no power over them at the moment.

And we want to be able to use this filter in order to modify the entire dashboard and not only one of its charts, how do we do that?

Let's select the tiny arrow in the upper right corner of the filter and go to apply to worksheets where we will be able to click on selected worksheets in the dialog box that opens, I can easily add chart one and chart three and then press

OK.

I hope the filter makes changes to all three

charts now.

And yes, it does nice.

However, one thing is a bit suspicious when I
UN filter the first few audio books,
the ratio of reviews to sales continues to
decrease.

And this makes no sense.

It appears that right now the ratios are all
calculated with respect to the total number of
audio books. Hm.

That's strange.

Let's check.

I suspect something is not as it should be when
I go and take a look at the other two
charts.

I see that the blending connection has not been
activated for the audiobook name field.

Let's activate the connection for both and see
if this changes things.

Now when I unfiltered the first few audiobooks,
the percentage doesn't decrease,
but it even goes up.

I believe it's fine.

Now, please bear in mind the following.

If I would like to use some of the charts
elements as a filter,

all I have to do is select, use as filter in
the upper right corner of a chart and then
all three charts will be updated.

This is another way to play around with filters,
whether we filter data from the actual filter
or simply click on a given chart element.

It doesn't make much of a difference in both
cases.

A filter will be applied.

We've constructed a dashboard that can easily
be filtered and unfiltered from here.

Now, we can explore the relationship between
different audio books,

the number of reviews they received their
average score and the ratio between reviews and
audiobook sales.

That's awesome play around with the data and do

not hesitate to share with us the insights you managed to uncover great job getting to the end of this exercise.

It was a real pleasure teaching you tableau and we hope to see you soon in some of our other modules until then a warm hug and thanks for watching.

Interactive filters - fix

Hi, one many of you experience difficulties with this part of the exercise, creating filters in this video.

Our goal will be to shed some light and hopefully clarify your doubts before applying the filter to all three charts.

You need to make sure the blending connections are working.

Go to chart one and click on data, edit relationships.

Then you need to make sure there is a relation for audiobook names.

Once this is done, check for all three charts.

If the blending connections are turned on, they need to be colored in red to make this check, you need to click on the data source audiobook sales and click on the icon next to the audiobook names.

Once the connections are turned on, you will be able to proceed and add the filter.

What you need to do is select the pie chart chart two and click on the tiny arrow in the upper right corner.

Then select filter audiobook name.

In order to use this filter to modify the whole dashboard, you need to go to the right corner of the dashboard where the audiobook names are placed again,

select the tiny arrow and click on.

Apply to worksheets, then select selected worksheets and mark all charts.

Ok.

Now the filter should be working properly.

Please make a check and see.

That's the case in your own workbook too.

Thanks for watching.