

Tableau calculated field examples pdf

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Table calculation is a transformation we apply to the values of a single measure in our view, based on the dimensions in the level of detail. Want To Get Tableau Training From Experts? Enroll Now For Free Demo On "Tableau Training". In Tableau view, there is a virtual table that is determined by the dimensions in the view. This table is not to be confused with the tables in our data source. Specifically, the virtual table is determined by the dimensions within the "level of detail". Tableau Table Calculations Tableau comes with several preset calculations that you can compute with the numbers in a few ways: sum, total, difference, percent of the current row, moving average, and more. These predefined calculations are called table calculations because they compute the results based on a virtual table that includes all the numbers on the view. Table calculations provide several benefits including: 1. As fast way to create advanced calculations even without knowing the underlying code. 2. Table calculations are designed for future use in fields, and can calculate fields in a table that is edited, this is a great way to edit the table and the different functions available in Tableau. Efficient processing: Table calculations are computed on a very small subset of the data source, making them an efficient solution for calculating results. Now to see how table calculation works we need to connect to the sample superstore and run an example of calculating the running total. Table calculations are added to measures, so in order to add a table calculation, click a measure that's on the view. The fastest way to add a table calculation is to hover over "Quick table calculation" and choose an option. After running total, the view will change. Table calculations are defined by how they are (1.) partitioned, and (2.) addressed – or how they are computed. In the example above the running total is being computed from left to right, which is the default address. This would mean that, by default, the table calculation is being addressed by the Product Category dimension. This leaves the Month dimension as the partitioning field. It is easy to change the addressing by changing how the table calculation is being computed. To do this, click on the measure with the table calculation again, now identified with a delta symbol, hover over compute using, and change how the calculation should be computed. Now after changing the addressing the view will update. Now that the addressing field has been changed to Product Category we can get more sensible analysis to look at each Product Category column, and look down across months to see how the sales built up throughout the year. Table calculations rely on two types of fields: addressing and partitioning fields. The key to understanding table calculations is to know how these fields work. Partitioning fields do what it sounds like they do. They partition your data into separate buckets, each of which is acted on by the calculations. Addressing fields define the "direction" that you want your calculation to take. Checkout Tableau Interview Questions Basic table calculation functions: LOOKUP(expression, [offset])This returns the value of the expression in a target row, specified as a relative offset from the current row. ZN()This returns the expression if it is not null; otherwise, it returns zero. Use this function when using zero values instead of null values. TOTAL()This returns the total for the given expression in a table calculation partition. RANK(expression, [asc|desc])This returns the standard competition rank for the current row in the partition. Identical values are assigned an identical rank. Use the optional 'asc' | 'desc' argument to specify ascending or descending order. The default is descending. WINDOW_AVG(expression, [start, end])This returns the average of the expression within the window. The window is defined by means of offsets from the current row. ABS()This returns the absolute value of the given number. INDEX()This returns the index of the current row in the partition, without any sorting with regard to value. The first-row index starts at 1 FIRST()This returns the number of rows from the current row to the first row in the partition. LAST()This returns the number of rows from the current row to the last row in the partition. CONTAINS(expression, expression to search for)This returns true if the given string contains the specified substring. List Of Tableau Courses: Tableau is the fastest growing business intelligence tool in the world which is mainly used for processing, analyzing, and deriving insights from the data which is available from the various data source. If you truly want to take your analysis to the next level can be only achieved by using calculations in tableau. Like any analytical software whether R, Excel, SAS, or Tableau, calculations on the tableau calculated field are the key to going from beginner to advanced. Tableau Calculated fields are one of the most powerful features of Tableau because it allows the authors to create new data out of the existing data. Calculated fields in Table help create new dimensions for example segments and new measures like ratios or sums. In this blog, we will be looking at the following topics. Why use calculated fields?Build your first calculated field in tableau.Types of calculationsLogical Calculations in Tableau calculated fieldDate Functions in Tableau calculated fieldWhy use calculated fields?To obtain accurate business intelligence, it is vital to focus on the data preparation process to improve the quality of data. The resulting high-quality data will simplify the data analytics process irrespective of data size or source. Therefore, it's always important to prepare your data as much as possible before it gets into Tableau. Below are the main reasons for using calculated fields in Tableau.To get rid of unwanted results for better analyses.To segment data in new waysTo prove a concept such as a new dimension or measure before making it a permanent field in the underlying data.To convert the data type of a field, such as converting string to dateTo aggregate dataTo take advantage of the power of parameters, putting choice in the hands of your end-usersTo calculate ratios across different variables in Tableau, saving database processing and storage resourcesBuild your first calculated field in TableauSTEP 1 - There are three ways to open a calculated field.Analysis Menu >> Create calculated Field...Right-click anywhere on the dimension or measures area>>Create>>Calculated Filed...On the data pane – open the drop-down menu on top of the dimension area >> Create Calculated Field...STEP 2 - In the calculation editor, implement the following steps:Enter a name for the calculation field. In this example, the field is called TotalSales.Enter a formula that represents your logic. For this example, the following formula is used.This formula gives us the total sales for Items.When finished, click OK.The new Calculation field is added to Measures in the Data pane as shown in the below picture prefixing equal to sign. Note: The new calculated field is added to the data pane either under dimensions or measures. If your calculation computes quantitative data then it's added to the measures. If it computes qualitative data then it's added to the dimensions. In this case, the Profit ratio is added to the measures area.Note – When you're in Tableau creating a calculated field, Tableau prohibits mixing Aggregate and Non-Aggregate Arguments.Types of calculationsThere are three main types of calculations you can use to create calculated fields in Tableau:Basic Calculations - Basic calculations allow you to transform values or members at the data source level of detail (a row-level calculation) or at the visualization level of detail (an aggregate calculation).Level of Detail (LOD) expressions - LOD calculations allow you to compute at the visualization level and data source level. These calculations give you even more control over the level of granularity you want to compute. They can be performed at a more granular level (INCLUDE), a less granular level (EXCLUDE), or an entirely independent level (FIXED) with respect to the granularity of the visualization.Table calculations - Table calculations allow you to transform values at the level of detail of the visualization only.Logical Calculations in Tableau Calculated FieldLogical calculations allow you to determine if a certain condition is true or false (Boolean logic).Date Functions in Tableau calculated fieldDate functions allow you to manipulate dates in your data source.Note - The complexity of your calculation will vary depending on the type of calculation (basic, level of detail (LOD) expressions or Table calculations) and the kind of challenge you're working on.ConclusionWe saw what are the different ways to open calculated fields in tableau. And how to create a calculated field in tableau. Using a Calculated field is when you truly start to take your analysis to the next level, so it's critical to learn the main logical functions that are extremely useful to get the ball rolling. We also learned about the date function which helps to manipulate dates in your data source. And finally some very important tips in using calculated fields.

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