Create custom reports with Excel PivotTables

This chapter outlines a basic road map about how to create custom Excel reports as the data mining reports can be used to create custom reports and charts in Excel.

> Throughout the chapter, we will take the per creative per day report as an example.

> It is important to take this chapter in its entirety as the various exercises follow each other.

- Create a basic report spreadsheet
- Create a pivot table
- Change the content of a pivot table
- Other uses of a pivot table
    - Plot a graph
    - Compare the daily click-through rate of formats

Create a basic report spreadsheet

To create a basic spreadsheet for the *Per creative per day* report:

1. Click *Datamine* in the left navigation menu. This opens the *Datamine* screen.
2. In the menu, under General reports, click *Per creative per day*.
3. Click the **From** field, a small calendar opens.
    - First, select the first date of the period you wish to create a report for.
    - Select the last date of the period you wish to create a report for.
4. Click the *Download as excel-file* button to create and download the *Per creative per day* report.
5. Open the file in Microsoft Excel. The spreadsheet lists the daily number of contacts, impressions, and clicks and the daily click-through rate for all bookings a creative is combined with.
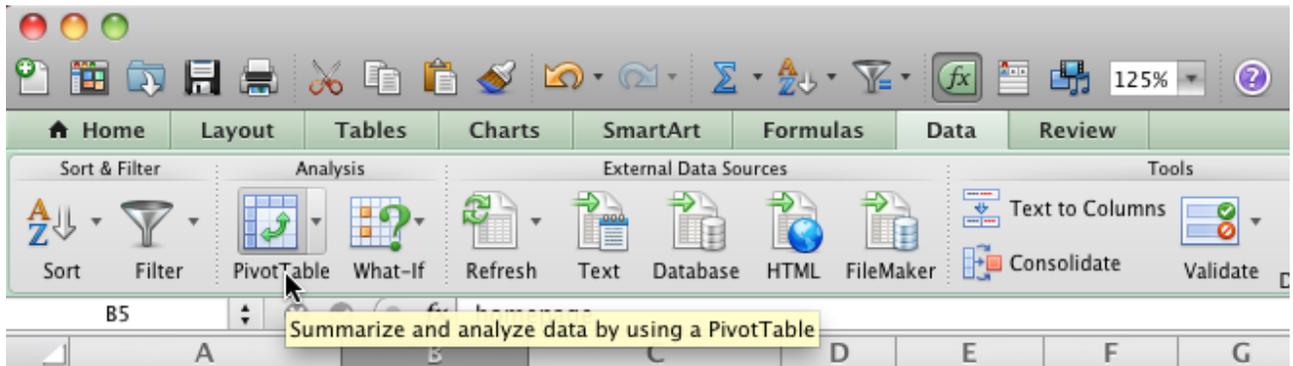
Create a pivot table

A **pivot table** summarizes data and reveals patterns and trends.

To create a pivot table:

1. Click any cell that contains text or numbers.
2. Click the *PivotTable* button in Excel.
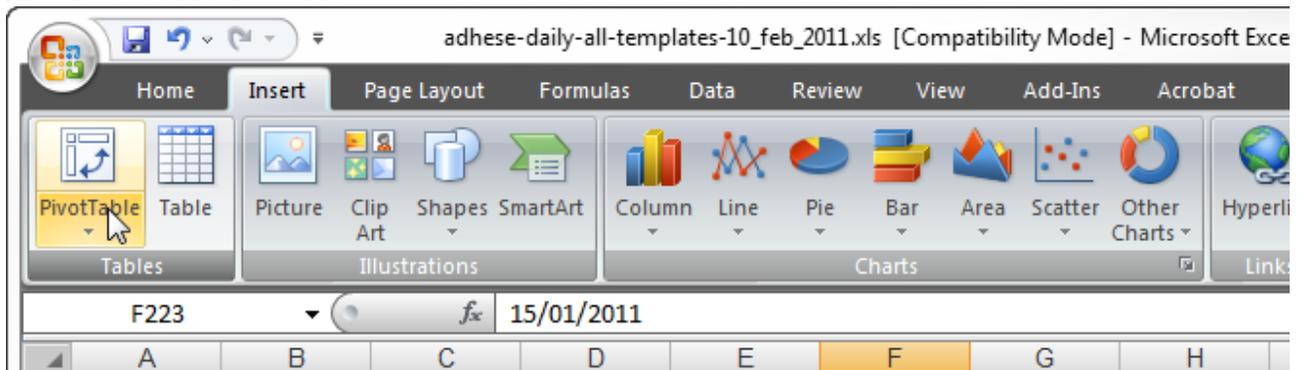
3. Depending on the version of Excel you are using, a dialog window may ask you to confirm which data you want to analyze and where you want to place the pivot table. If you see the Create PivotTable dialog, click *OK* to confirm the default values.
4. Excel creates a pivot table based on all data in the current worksheet and places the pivot table in a new worksheet. Depending on the version of Excel, your new pivot table may be empty or filled with default parameters.

Change the content of a pivot table

The pivot table we are going to recreate is quite basic. It shows you the daily number of impressions and clicks for each type of format.

Row Labels	Column Labels				Total Sum of impressions	Total Sum of clicks
	Leaderboard		Medium Rectangle			
	Sum of impressions	Sum of clicks	Sum of impressions	Sum of clicks		
▼ The Book Store	3154	304	1053	94	4207	398
2015-01-06	211	15	73	6	284	21
2015-01-07 00:00:00	399	34	145	14	544	48
2015-01-08 00:00:00	412	47	145	5	557	52
2015-01-09 00:00:00	385	37	120	18	505	55
2015-01-10 00:00:00	375	34	127	13	502	47
2015-01-11 00:00:00	349	30	115	6	464	36
2015-01-12 00:00:00	359	38	123	13	482	51
2015-01-13 00:00:00	352	44	118	11	470	55
2015-01-14 00:00:00	312	25	87	8	399	33
▼ The Clothes Store	3847	359	1111	104	4958	463
2015-01-26 00:00:00	360	25	122	13	482	38
2015-01-27 00:00:00	709	63	211	20	920	83
2015-01-28 00:00:00	704	85	199	25	903	110
2015-01-29 00:00:00	693	45	208	19	901	64
2015-01-30 00:00:00	686	76	207	16	893	92
2015-01-31 00:00:00	695	65	164	11	859	76
▼ The Computer Store	5264	505			5264	505
2015-01-06	226	23			226	23
2015-01-07 00:00:00	315	36			315	36
2015-01-08 00:00:00	278	21			278	21
2015-01-09 00:00:00	316	32			316	32
2015-01-10 00:00:00	320	30			320	30
2015-01-11 00:00:00	308	41			308	41
2015-01-12 00:00:00	318	32			318	32
2015-01-13 00:00:00	361	35			361	35
2015-01-14 00:00:00	381	40			381	40
2015-01-15 00:00:00	521	44			521	44
2015-01-16 00:00:00	438	40			438	40
2015-01-17 00:00:00	459	38			459	38
2015-01-18 00:00:00	408	23			408	23
2015-01-19 00:00:00	270	28			270	28
2015-01-20 00:00:00	211	27			211	27
2015-01-21 00:00:00	134	15			134	15
Grand Total	12265	1168	2164	198	14429	1366

To recreate the above pivot table, we need to change the pivot table by dragging items between the Row Labels, Column Labels and Values areas in the PivotTable Builder.

To change the pivot table:

1. Go to the PivotTable builder.
2. Select the following variables in the **Field name** section:
   - campaignName,
   - formatName,

- start,
- clicks,
- impressions.

3. Drag the *campaignName* and *start* variable to the **Row Labels** area. Put the *start* variable under the *campaignName* variable.
4. Drag the *formatName* variable to the **Column Labels** area.
5. Drag the *clicks* and *impressions* variable to the **Values** area.
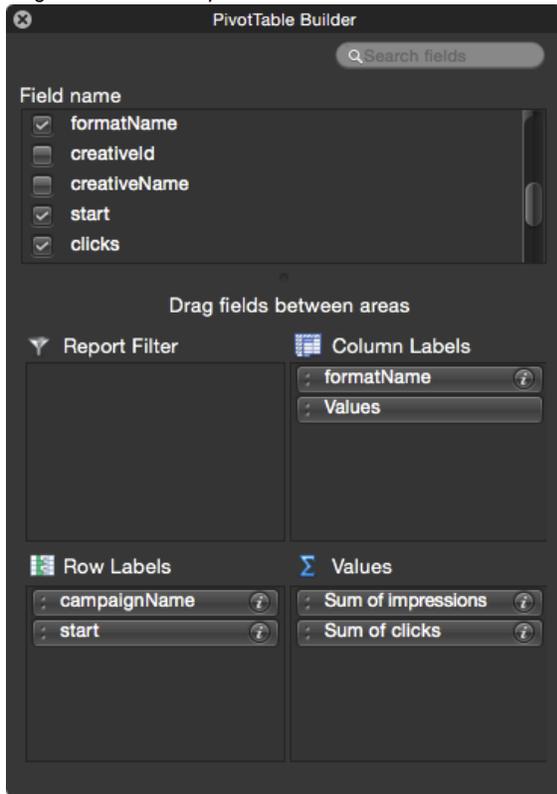
Add new variables or drag variables from area to area to get acquainted with the intricacies of pivot tables. The content of the pivot table will change according to the adjustments in the PivotTable Builder.

Other uses of a pivot table

Data mining reports allow you to produce more than pivot tables alone. For example, you can use the pivot table's data to plot graphs or make comparisons.

Plot a graph

We will graph the evolution of a campaign's daily impressions for the leaderboard and medium rectangle format.
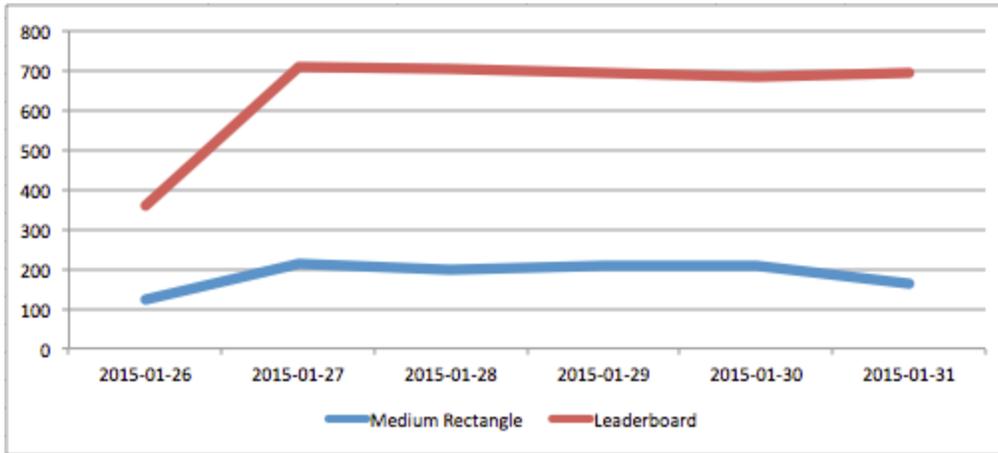
To get the above graph, create a pivot table first (see Create a PivotTable and Change the content of a PivotTable).

To restrict the report to an individual campaign, click the filter icon next to *Row Labels* and deselect the campaigns you do not want to see in the report.

Then, select the values from the *Sum of impressions* columns and insert a chart.

Compare the daily click-through rate of formats

To compare the click-through rates for the various formats of a campaign:

1. Add a calculated field to the pivot table. Go to the *Insert* menu and click *Calculated Field* …. This opens the *Insert Calculated Field* dialog window.
2. Provide a name in the **Name** field, for example Click-rate.
3. Insert the formula in the **Formula** field.
4. Click the *Add* button to save the calculated field.
5. Click the *Ok button*.
6. To add the newly created calculated field to the pivot table, drag the *Click-rate* variable to the **Values** section in the PivotTable Builder.
7. Select the values and
   - Add a conditional formatting rule (Format > Conditional Formatting …) to highlight high and low values in the pivot table, and/or
   - Plot a chart to visualize the comparison.

	Column Labels								
	Leaderboard			Medium Rectangle			Total Sum of impressions	Total Sum of clicks	Total Click-rate
Row Labels	Sum of impressions	Sum of clicks	Click-rate	Sum of impressions	Sum of clicks	Click-rate			
The Clothes Store	3847	359	9,33%	1111	104	9,36%	4958	463	9,3384%
2015-01-26	360	25	6,94%	122	13	10,66%	482	38	7,8838%
2015-01-27	709	63	8,89%	211	20	9,48%	920	83	9,0217%
2015-01-28	704	85	12,07%	199	25	12,56%	903	110	12,1816%
2015-01-29	693	45	6,49%	208	19	9,13%	901	64	7,1032%
2015-01-30	686	76	11,08%	207	16	7,73%	893	92	10,3024%
2015-01-31	695	65	9,35%	164	11	6,71%	859	76	8,8475%
Grand Total	3847	359	9,33%	1111	104	9,36%	4958	463	9,3384%