

تحليل الأعمال والبيانات
باستخدام PowerBI - الجزء الثاني

المقدمة

في الجزء الثاني من كورس تحليل البيانات والأعمال باستخدام أسطورة التحليل الأشهر عالمياً برنامج PowerBI سنكمل مسيرتنا مع عالم البيانات، وسنعرف كيف نستغل المعلومات الموجودة للوصول إلى معلومات أكثر عمقاً. سنحلل الأداء باستخدام الـ Data analysis Expressions المختلفة، وعندما نصل للرؤية الكاملة سننشئ الـ Dashboard الخاصة بنا في أحسن Data visualization report في أسرع وقت وبأقل مجهود. سنتعلم أيضاً كيفية الاستفادة من الـ Dashboard في اتخاذ قرارات مناسبة

Related

[RELATED] Returns related values in each row of a table based on relationships with other tables

=RELATED(ColumnName)

The column that contains the values you want to retrieve

Example:

- Product_Layout/ProductName
- Territory_Layout/Country

Basic Math & State Functions

[SUM] Calculates the sum of a column

=SUM(ColumnNames)

[AVERAGE] Returns the average arithmetic mean of all the numbers in a column

=AVERAGE(ColumnNames)

[MAX] Returns the largest value in a column or between two scalar expressions

=MAX(ColumnNames) or =MAX(Scalar1, [Scalar2])

[MIN] Returns the smallest value in a column or between two scalar expressions

=MIN(ColumnNames) or =MIN(Scalar1, [Scalar2])

[DIVIDE] Returns division and returns the integer part of the result if any

=DIVIDE(Numerator, Denominator, [AlternateResult])

COUNT, COUNTA, DISTINCTCOUNT & COUNTROWS

[COUNT] Counts the number of cells in a column that contain numbers

=COUNT(ColumnNames)

[COUNTA] Counts the number of non-empty cells in a column (counted as text even if empty)

=COUNTA(ColumnNames)

[DISTINCTCOUNT] Counts the number of distinct or unique values in a column

=DISTINCTCOUNT(ColumnNames)

[COUNTROWS] Counts the number of rows in the specified table, or a table defined by an expression

=COUNTROWS(Table)

Calculate

[CALCULATE] Evaluates a given expression or formula under a set of defined filters

=CALCULATE(Expression, [Filter1], [Filter2], ...)

Use the following syntax to filter the results of a calculation:

1. Specify the expression to be calculated.

2. Specify the filters to be applied.

Example:

Calculate the total sales for each product category.

Example:

Calculate the total sales for each product category, excluding the "Other" category.

ALL

[ALL] Returns all rows in a table, or all values in a column, ignoring any filters that have been applied

=ALL([Table or ColumnName], [ColumnName1], [ColumnName2], ...)

List of columns that you want to clear filters on (optional)

Example:

Calculate the total sales for each product category, ignoring the "Other" category.

Example:

Calculate the total sales for each product category, ignoring the "Other" category and the "Electronics" category.

FILTER

[FILTER] Returns a table that represents a subset of another table or expression

=FILTER(Table, FilterExpression)

Table to be filtered

Example:

- Territory_Layout
- Customer_Layout

A Boolean (True/False) filter expression to be evaluated for each row of the table

Example:

- Territory_Layout/Country < "USA"
- Customer_Layout > 1000
- Product/Price > (Sum of Avg Price)

Using X

Iterator (or "X") Functions allow you to loop through the same calculation or expression on each row of a table, and then apply some sort of aggregation to the results (SUM, MAX, etc)

=SUMX(Table, Expression)

Aggregation to apply to calculated results

Table in which the expression will be evaluated

Expression to be evaluated for each row of the given table

Example:

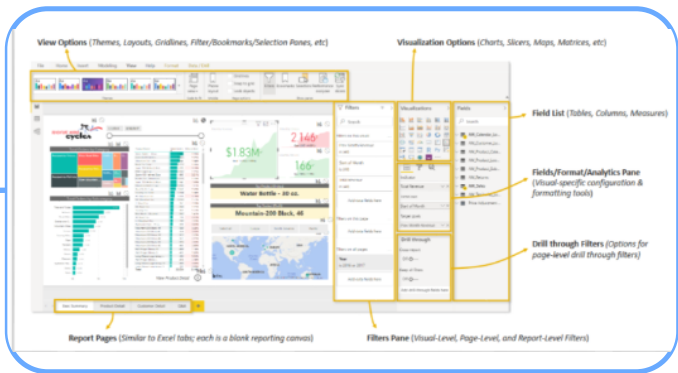
Calculate the total sales for each product category, excluding the "Other" category.

Example:

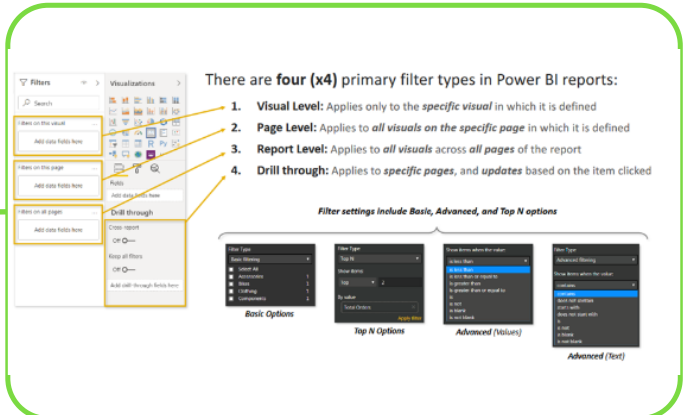
Calculate the total sales for each product category, excluding the "Other" category and the "Electronics" category.

SUMX - COUNTX - COUNTAX - AVERAGEX - MAXX - MINX

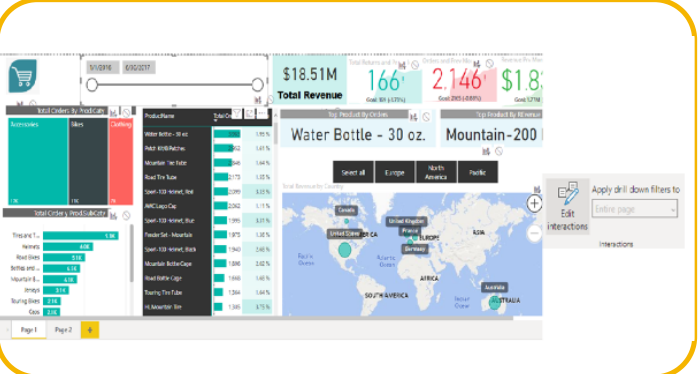
Reports VIEW



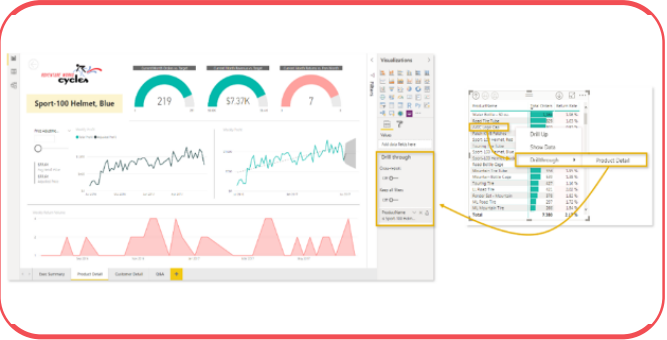
Filtering Options



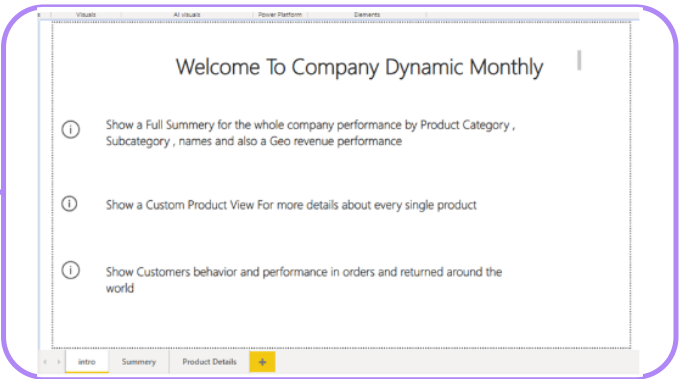
Edit interaction



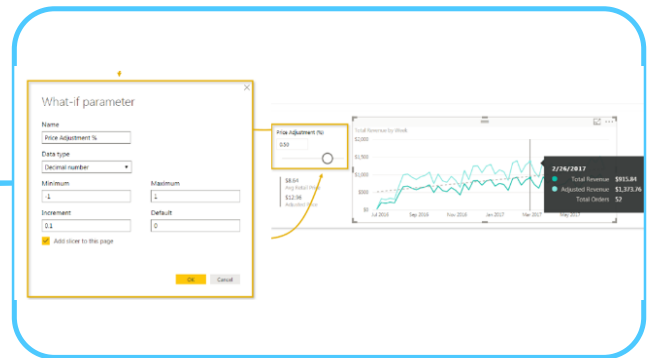
Drill through Filter



Bookmarks



What If Scenarios (Price Adjustment)



الخاتمة

تعلمت من هذا الكورس

إضافة أعمدة حسابية جديدة للوصول إلى تفاصيل أكثر دقة استخدام الـ Measures لبناء أكثر عمقاً استخدام الـ Data Analysis Expressions

إضافة الرسوميات البيانية مختلفة الأشكال والأنواع إنشاء الفلاتر للوصول إلى مستوى المعلومات المطلوب عرض المقاييس الرئيسية باستخدام الـ Cards and KPIs Visuals

عرض البيانات طبقاً للخرائط الجغرافية إنشاء Trends and Area charts إنشاء وإدارة الـ Roles داخل Power BI