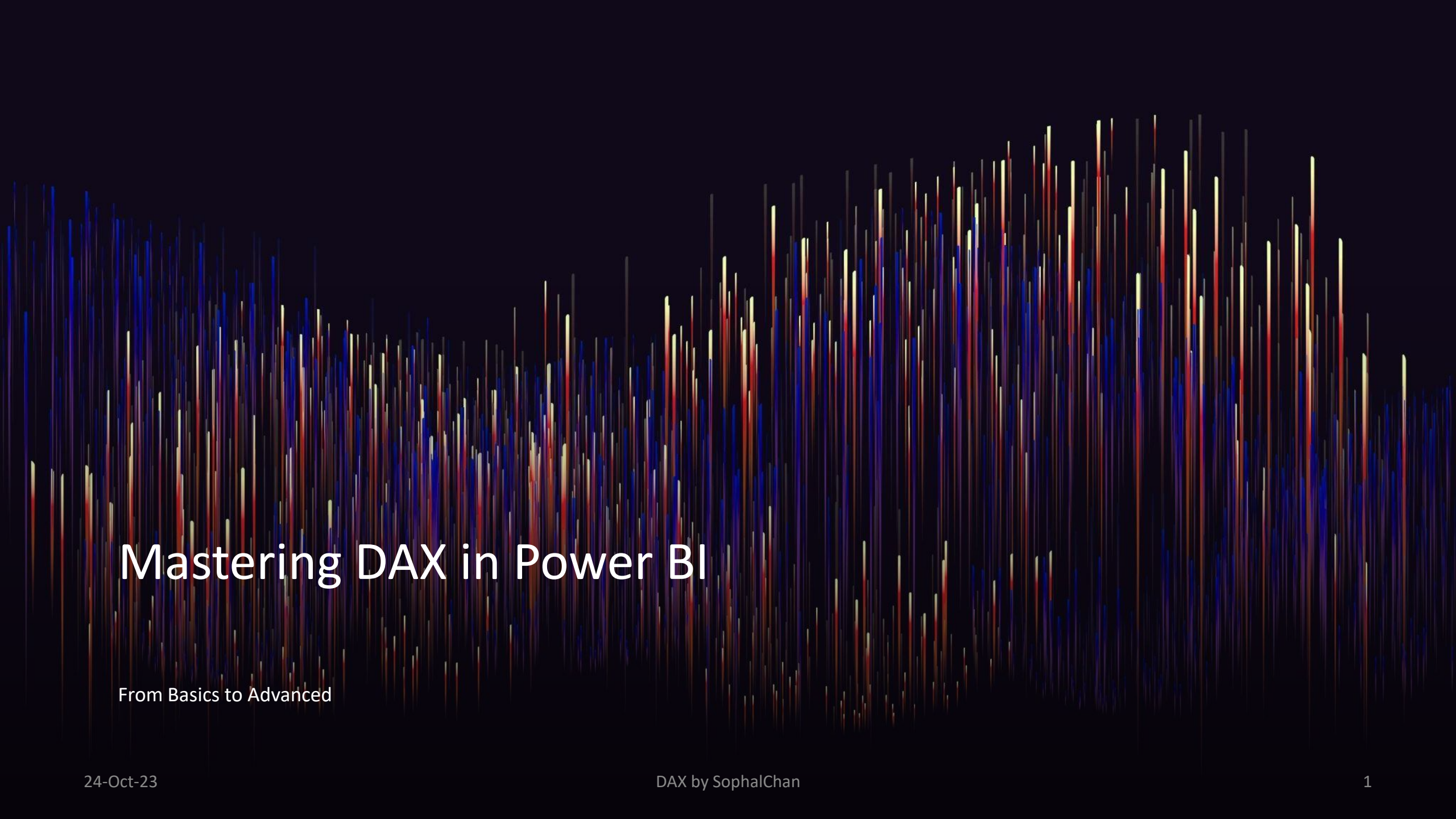


Mastering DAX in Power BI

From Basics to Advanced

Agenda

- 1. Introduction to DAX
- 2. Basic DAX functions
- 3. Working with Date and Time in DAX
- 4. Aggregations and Calculations
- 5. Advanced DAX concepts
- 6. DAX best practices

What is DAX?

Data Analysis Expressions (DAX) is a formula expression language (programming language) used in Analysis Services, Power BI, and Power Pivot in Excel.

- Calculated Measures
- Calculated Columns
- Calculated Tables

Why DAX?

Similar to Excel Expressions

Leverage knowledge of Excel Expressions

Less of a learning curve

Data Analysis Expressions (DAX)

DAX (Power BI)

DAX is used throughout Microsoft Power BI for creating calculated columns, measures, and custom tables. It is a collection of functions, operators, and constants that can be used in a formula, or expression. The functions calculate and return one or more values. We can use DAX for solving a number of calculations and data analysis problems, which can help you create new information from data that is already in your model.

https://learn.microsoft.com/en-us/training/paths/dax-power-bi/

DAX Syntax

Function: Sum

Syntax:

```
Measure Name= Function(Table[Field])
```

Examlples :

```
Total_Sale_product = SUM(DW_Sales_Detail[Total_Amount])
```

Basic Functions String Manipulation (working with TexT)

- Formatting
- FORMAT

- Concatenating
- CONCATENATE

- Casing
- LOWER
- UPPER

- Trimming
- LEFT
- RIGHT

- Splitting
- MID

- Searching
- SEARCH
- FIND

- Replacing
- REPLACE
- SUBSTITUTE

Working with Text

LEFT, RIGHT, CONCATENATE, UPPER, LOWER.

Filters in DAX

FILTER function, ALL, ALLEXCEPT.

Relationships in DAX

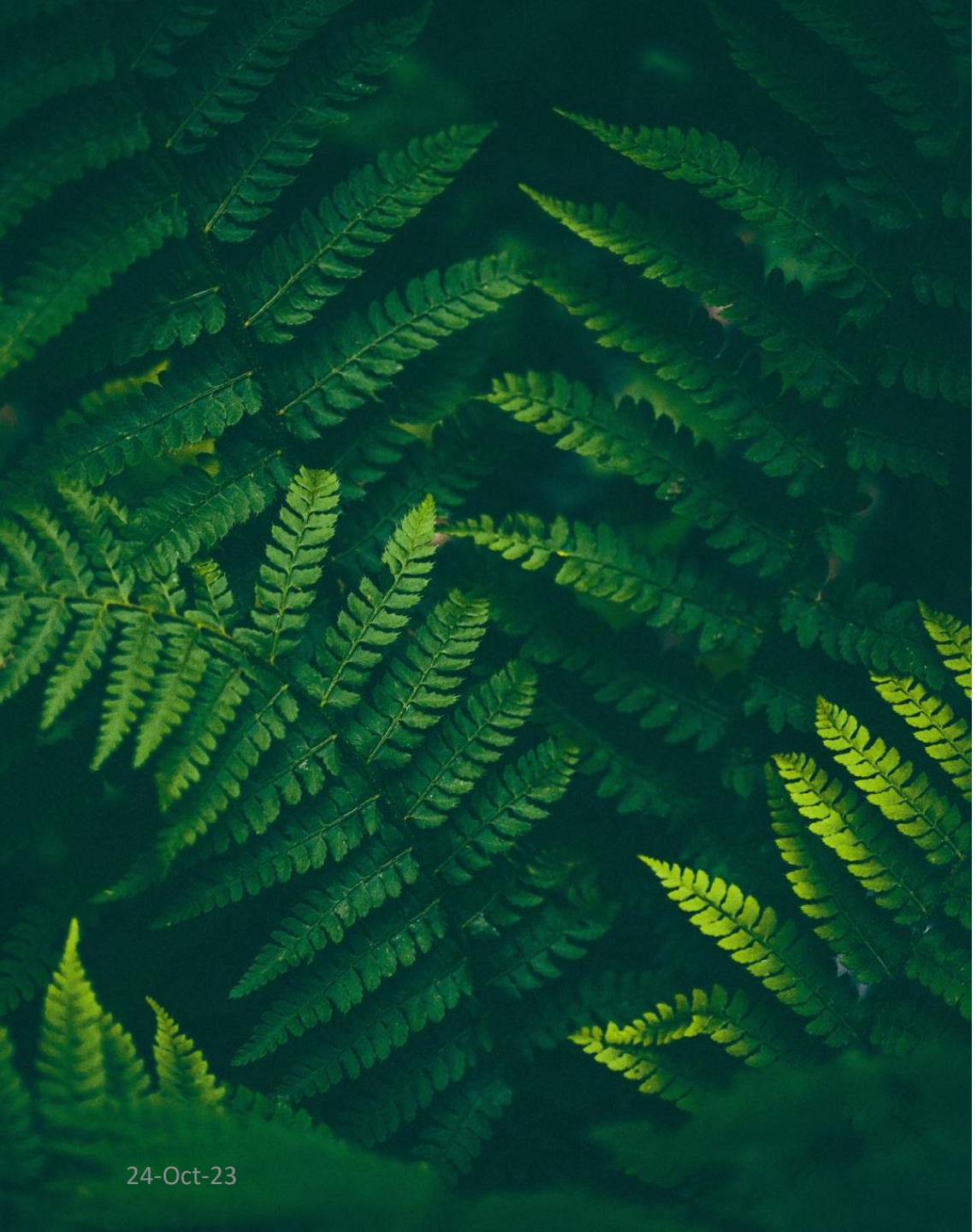
RELATED, RELATEDTABLE, importance in aggregations.

Time Intelligence

- DATE, YEAR, MONTH, DAY, MTD, YTD calculations.

Aggregations

SUMX, AVERAGEX, ROW, FILTER.



Iterators

- Functions like SUMX, RANKX.

Context in DAX

Row context vs. Filter context, CALCULATE & CALCULATETABLE.

DAX Patterns

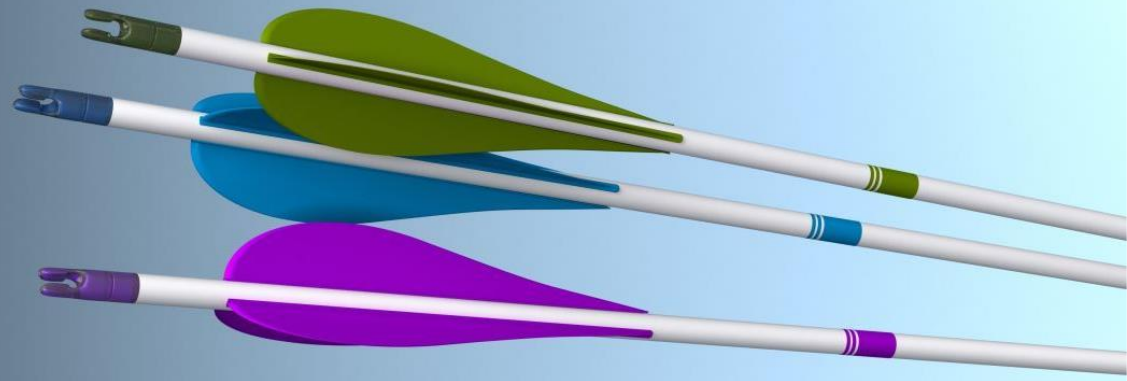
Time Patterns, Binning, Segmentation.

DAX and Power Query

- Differences, complementary in data modeling.

Performance Considerations

- Factors affecting performance, optimization tips.



Debugging and Tools

DAX Studio, best practices for debugging.

DAX Best Practices

Q&A

Thanks.