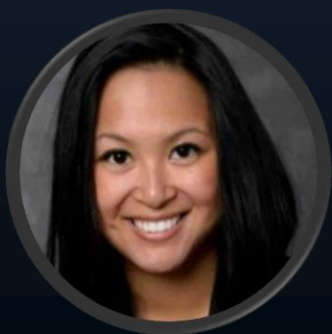




Power BI Next Step

Transform your Power BI experience with Copilot



Lada Hill
Program Manager at Microsoft

Microsoft Cloud Runs on trust...

Your data is your **data**

Your data from any fine-tuning is not used to train the foundation AI models

Your data is **protected** by the most comprehensive enterprise compliance and security controls

Copilot in Power BI

Overview of Copilot experiences

Copilot **boosts productivity** in DAX query view by writing DAX queries

Copilot makes **documentation easy** by generating measure descriptions

Copilot **speeds up report creation** by suggesting and drafting report pages

Copilot **generates synonyms** for all your items to improve Q&A visual

Copilot creates **targeted narratives** by summarizing your report in seconds

✓ Power BI Desktop

Planned for web

✓ Power BI Desktop

✓ Edit model in web

✓ Power BI Desktop

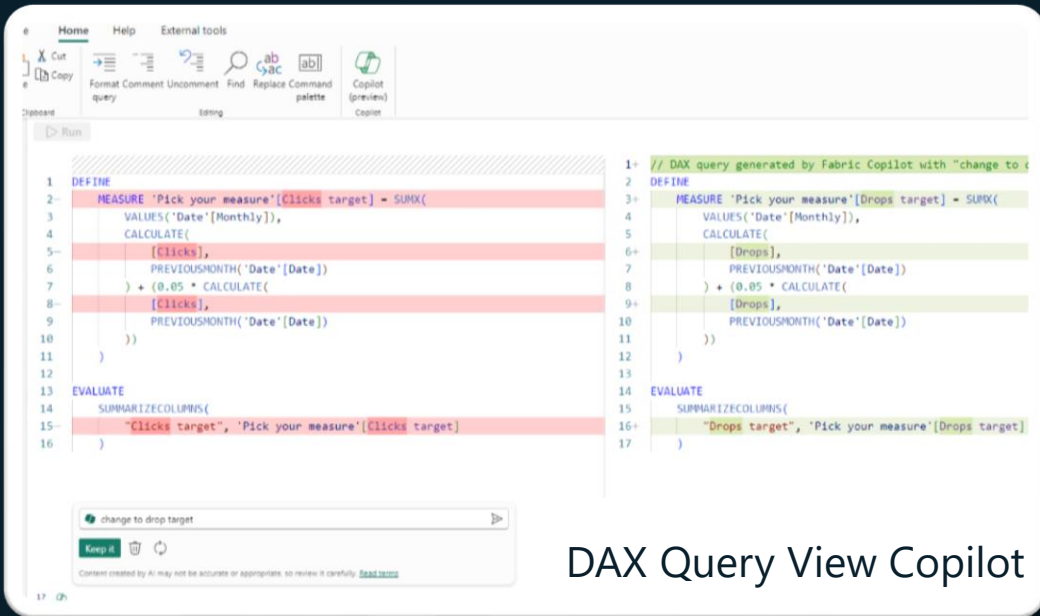
✓ Edit report in web

✓ Power BI Desktop

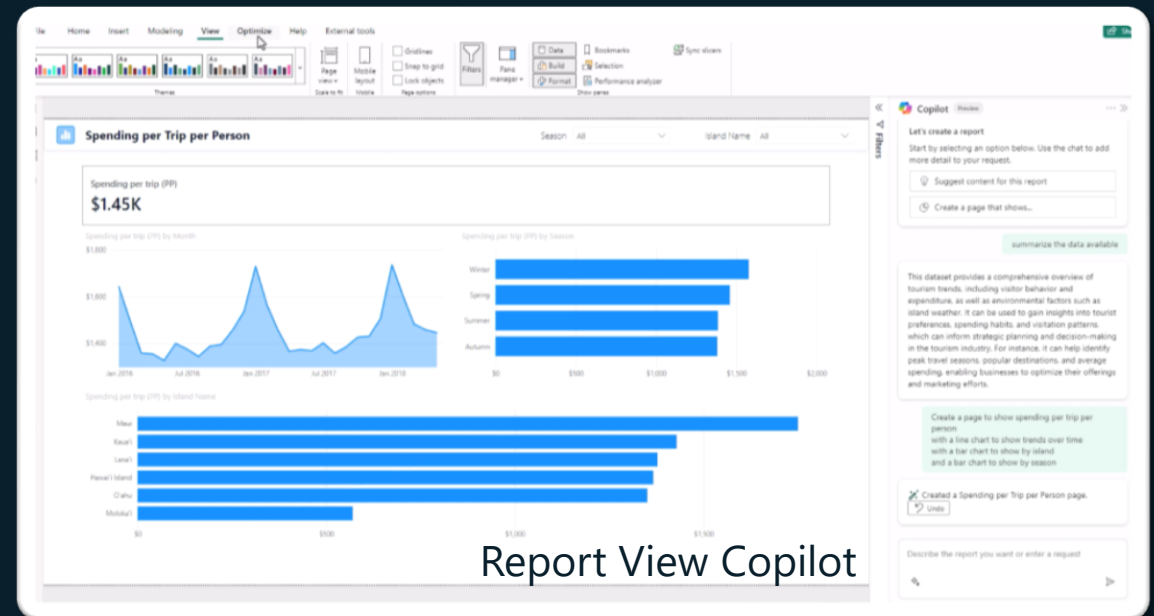
Planned for web

✓ Power BI Desktop

✓ Reports and Apps



DAX Query View Copilot



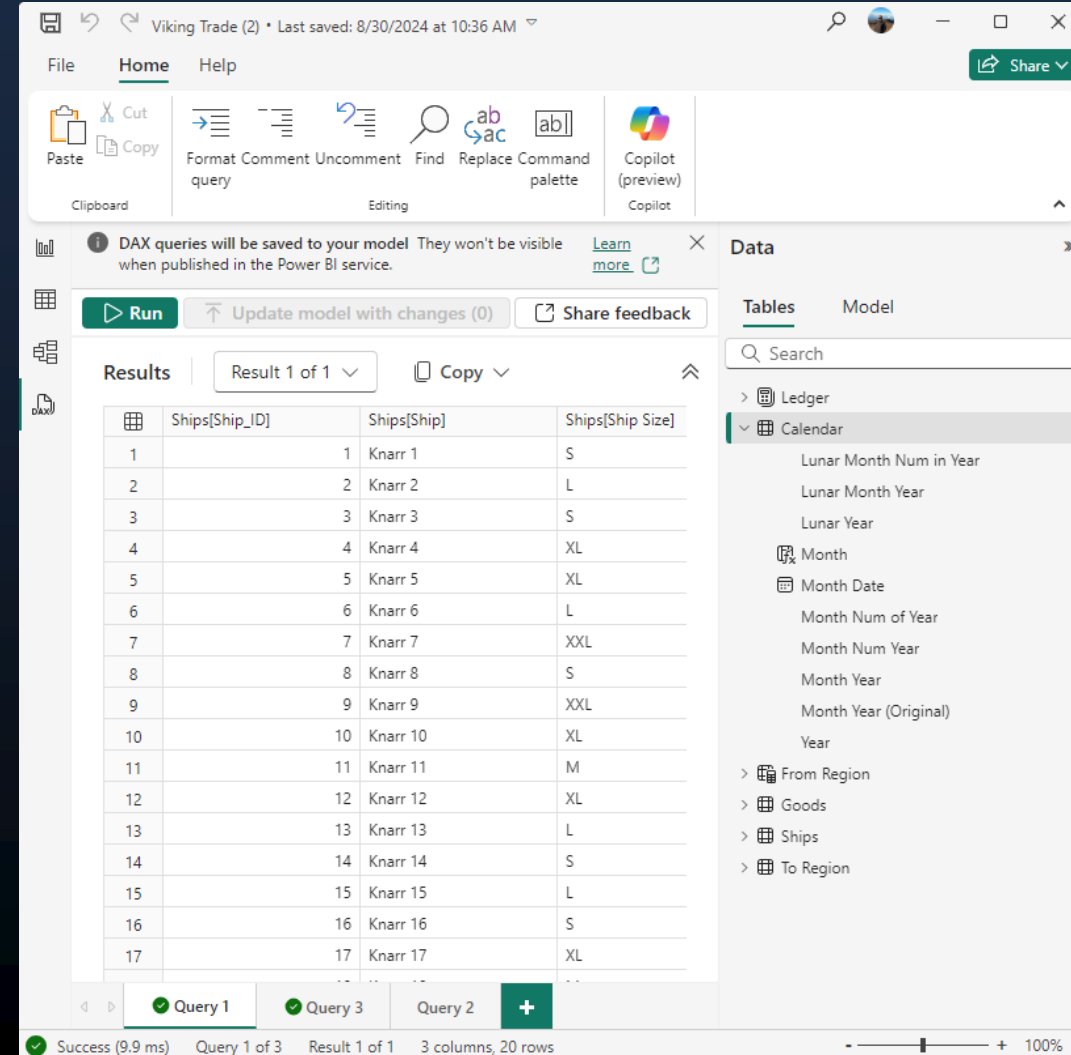
Report View Copilot

Copilot experiences for the BI Developer

Copilot in Power BI

Creating metrics and calculations (DAX Query View)

- Improve your productivity by using Copilot to generate queries and measures
- Run the generated queries to see the results without the worry of keeping the queries
- You can easily change your prompt and ask Copilot to update the measures
- Update the model with your queries/changes with a single click



The screenshot displays the Power BI DAX Query View interface. The top ribbon includes tabs for File, Home, and Help. The Home tab is active, showing options like Paste, Copy, Cut, Format Comment query, Uncomment query, Find, Replace Command palette, and Copilot (preview). A notification banner states: "DAX queries will be saved to your model. They won't be visible when published in the Power BI service." Below this, there are buttons for Run, Update model with changes (0), and Share feedback. The main area shows the Results of a query, displaying a table with columns: Ships[Ship_ID], Ships[Ship], and Ships[Ship Size]. The table contains 17 rows of data. On the right, the Data pane shows the model structure with tables like Ledger, Calendar, Month, Month Date, Month Num of Year, Month Num Year, Month Year, Month Year (Original), Year, From Region, Goods, Ships, and To Region. The bottom status bar indicates "Success (9.9 ms) Query 1 of 3 Result 1 of 1 3 columns, 20 rows".

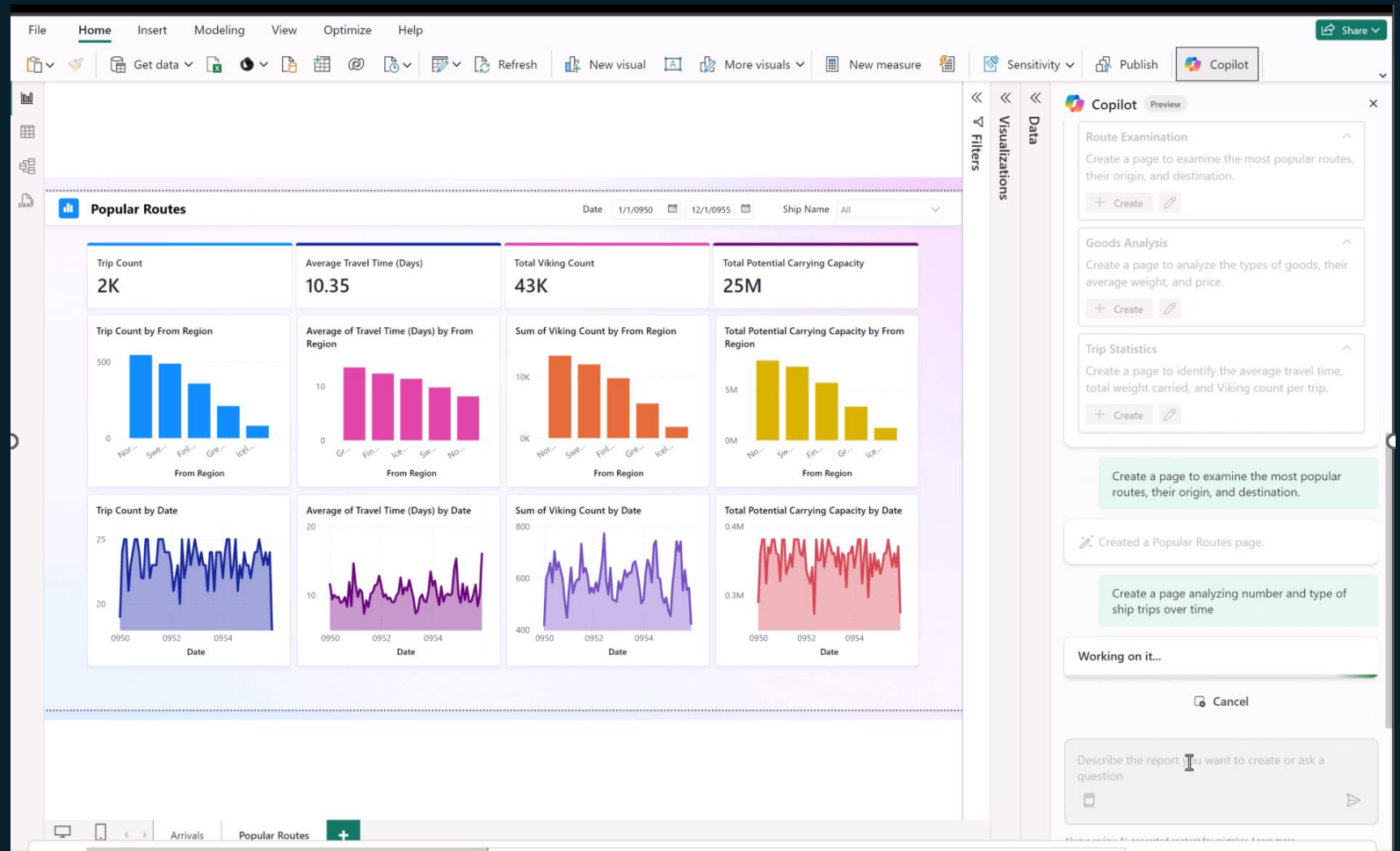
	Ships[Ship_ID]	Ships[Ship]	Ships[Ship Size]
1	1	Knarr 1	S
2	2	Knarr 2	L
3	3	Knarr 3	S
4	4	Knarr 4	XL
5	5	Knarr 5	XL
6	6	Knarr 6	L
7	7	Knarr 7	XXL
8	8	Knarr 8	S
9	9	Knarr 9	XXL
10	10	Knarr 10	XL
11	11	Knarr 11	M
12	12	Knarr 12	XL
13	13	Knarr 13	L
14	14	Knarr 14	S
15	15	Knarr 15	L
16	16	Knarr 16	S
17	17	Knarr 17	XL

Copilot in Power BI

Getting Started Report Creation

Use Copilot to quickly get started creating Power BI reports

- Use Copilot to automatically suggest reports most relevant to your data
- Ask Copilot to create report pages and visuals based on your needs



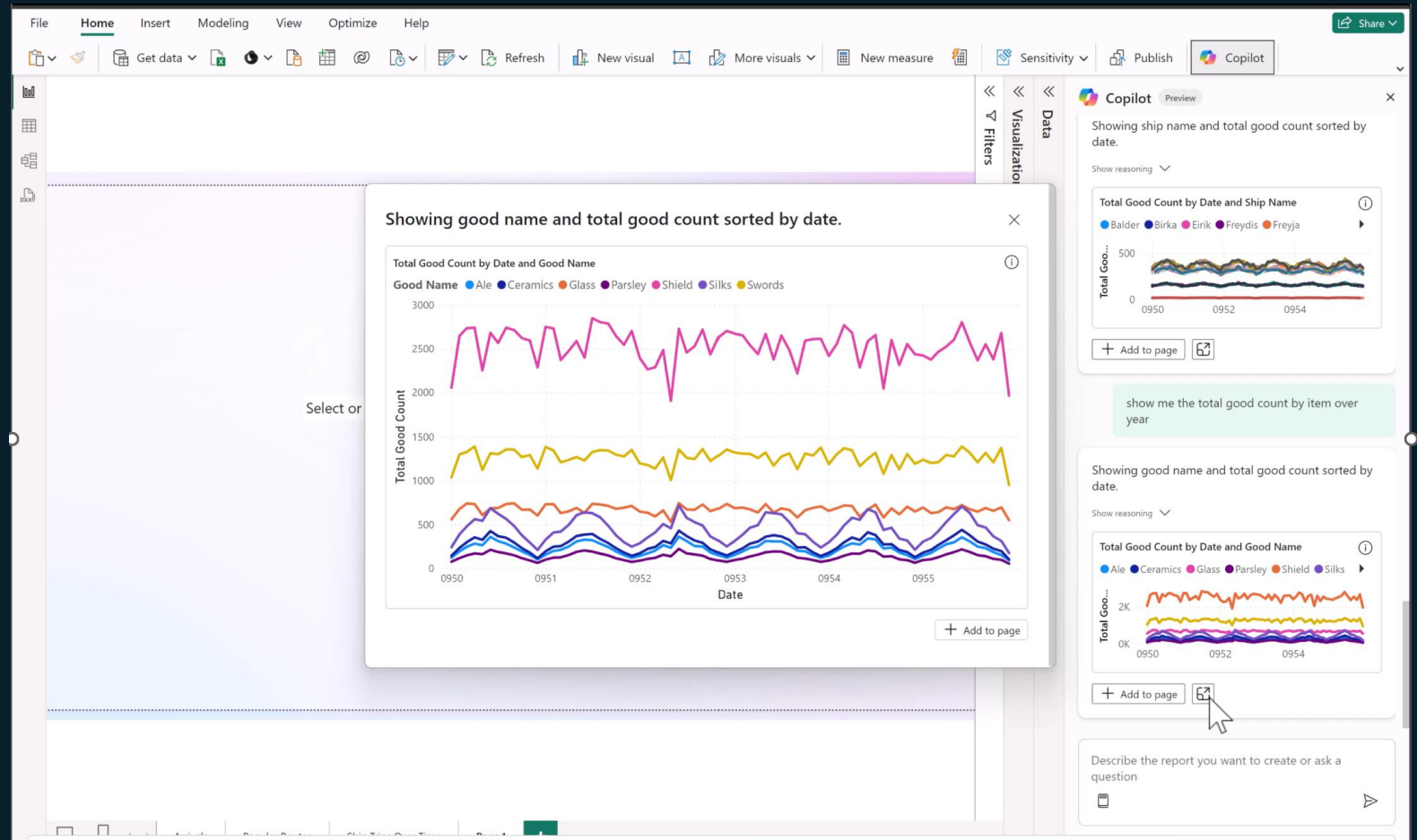
Copilot in Power BI

Answering data questions

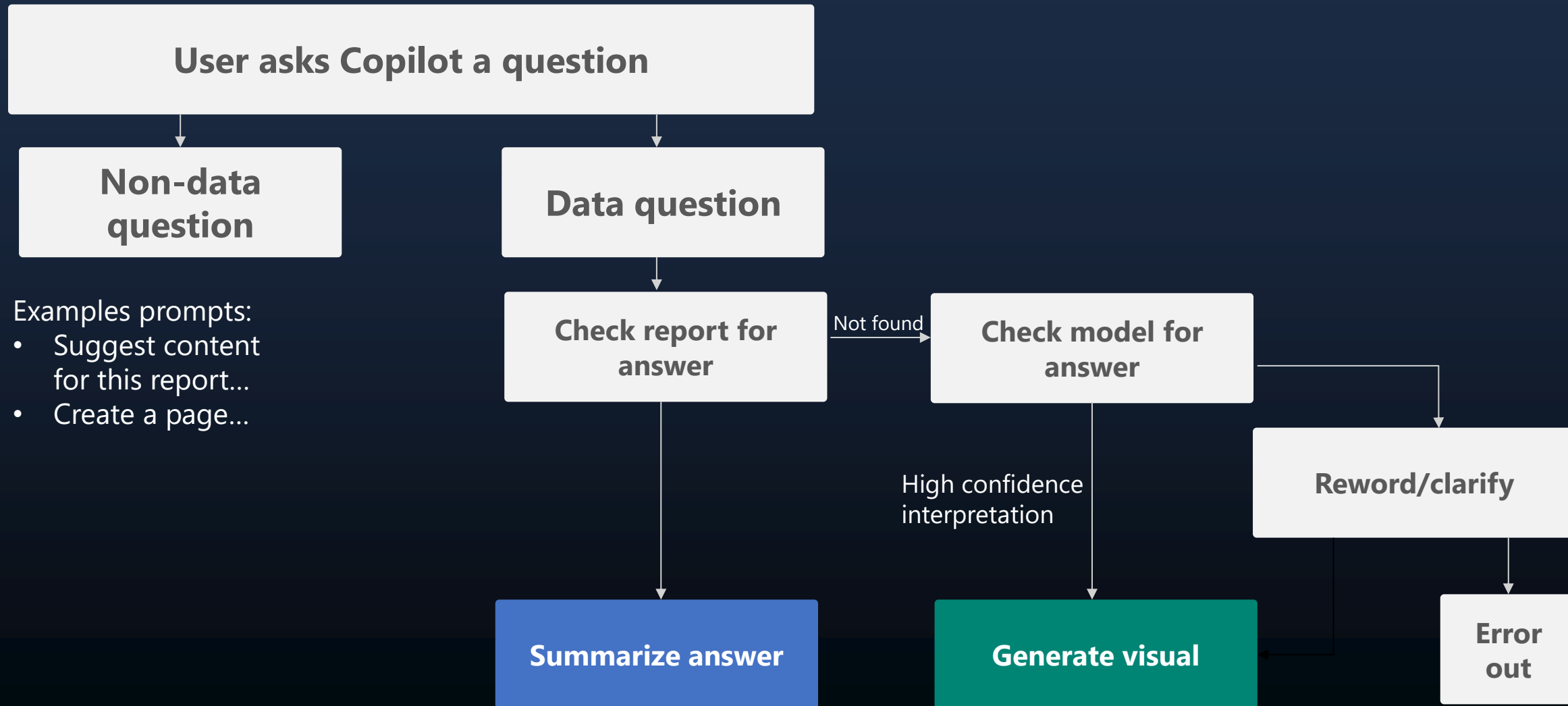
Ask Copilot questions about data in your model*

- Explore your data by asking questions in natural language
- Use Copilot to search existing visuals or create new visuals from your model to find answers
- Ask Copilot to create new visuals to add to reports

* Ensure preview toggle is on



Behind the scenes (over simplified)



How does Copilot answer my question?

Copilot makes use of the following:

- Conceptual schema from semantic model (table/column names, related tables, data types etc.)
- Linguistic schema from Q&A (synonyms and relationships)
- Chat history in Copilot for the current session
- Clarifications provided by the user

Copilot does not make use of:

- Table, Column or Measure descriptions from the semantic model
- Code comments in M or DAX editors

What questions can I ask?

For specific data questions, Copilot can **search existing visuals** from your report or **create new visuals** from your model to find answers.

Copilot is best at answering questions using **existing measures and columns** in your semantic model. Questions may include asking for existing measures filtered to a different region or span of time than they are on the report, a metric split into categories, or how a measure changes with time.

“Can you show me sales amount by region?”

where both sales amount and region are already columns in the data

“What were the top 5 selling products in North America last month?”

where product, region, and date are already columns in the data, and Copilot helps with top N filtering to produce the visual.

“Tell me the average price of gasoline per gallon over the last 30 days.”

where price per gallon is a measure already contained in the model, and Copilot helps by taking the average and filtering by relative date to produce the visual.

Follow up questions

Copilot can also respond to **follow up requests** based on what you have already asked in your current chat session.

Original question:

Show me total orders by each store

Follow up 1:

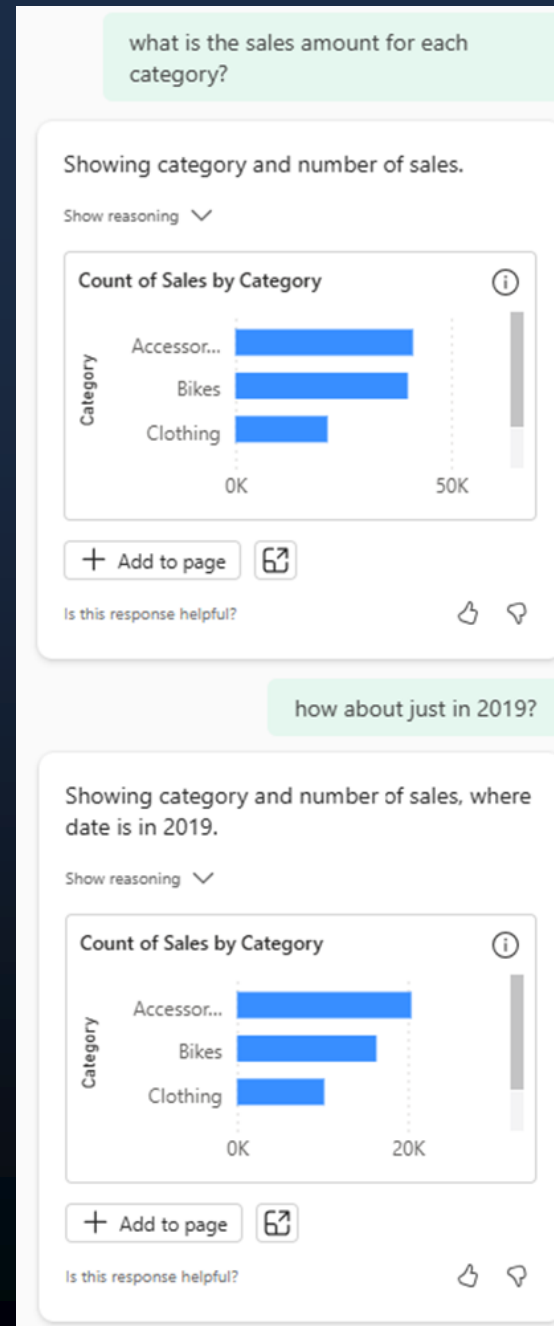
Split by region

Follow up 2:

For just 2020

Follow up 3:

Filtered to France only



Unsupported question types

Copilot can't currently answer questions that:

- ✗ Require on-the-fly calculations
- ✗ Generate new insights like anomaly detection, forecasting, or finding key influencers
- ✗ Require data not in the semantic model

"Show me the difference in performance between sales in Europe and in America over time"

This question requires calculating sales for each region and finding the difference which isn't a current measure in the model.

"Why do our sales go down every July?"

This question involves generating deeper insights from the provided data.

"How many books do you think we will sell next year?"

This question asks for forecasting, which isn't currently supported.

What makes a good question structure?

Think about what visual you expect will answer your question. Try to order your terms in this way:

Average ticket sales by movie genre

... split by region

... released in 2024

Top 5 movie titles by total ticket sales

... as a column chart

1. preferred sort order
2. aggregation on value field by dimension field
3. legend
4. filters
5. visual type

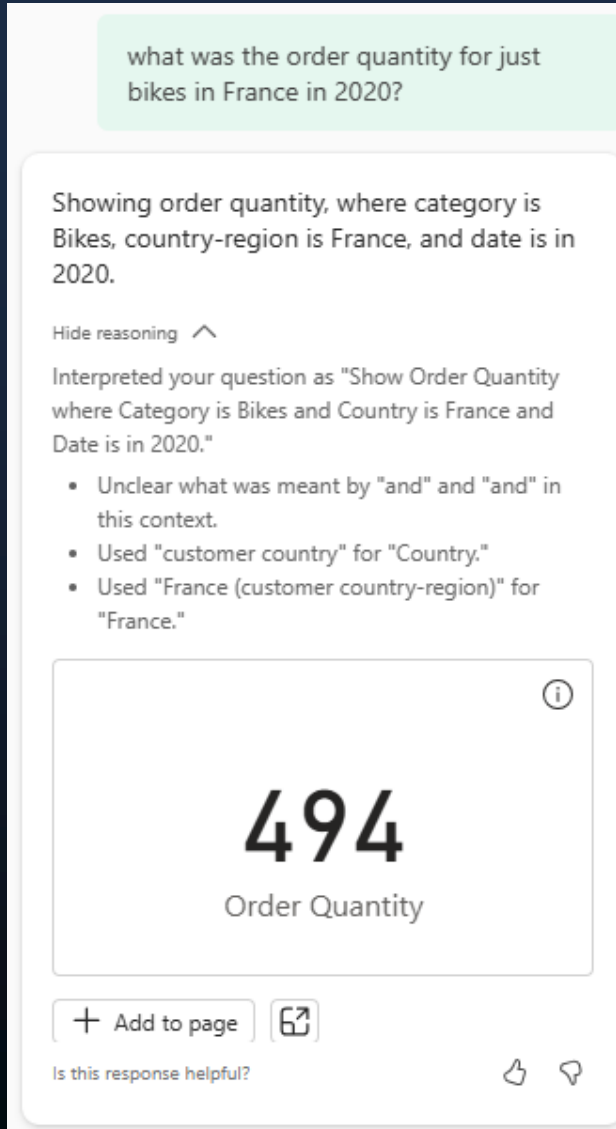
For the best response, use actual field names from the data “total salesAmt by orderDate” to ensure Copilot can match your question with the correct fields.

Reading the answer

Description of the visual produced

Visual answer

"i" mentions that filters from the report were not applied when generating this answer.



"Show reasoning"

Restatement of how Copilot interpreted your question. If your original question was good to go, you'll see it repeated here. Otherwise, Copilot will attempt to reword your question into something it can understand.

Bullets represent what phrases used were matched against the data in the model.

Visual actions

Enlarge to see the visual bigger and in edit mode, you can also add it to the current report page.

When to use Q&A visual vs. Copilot?

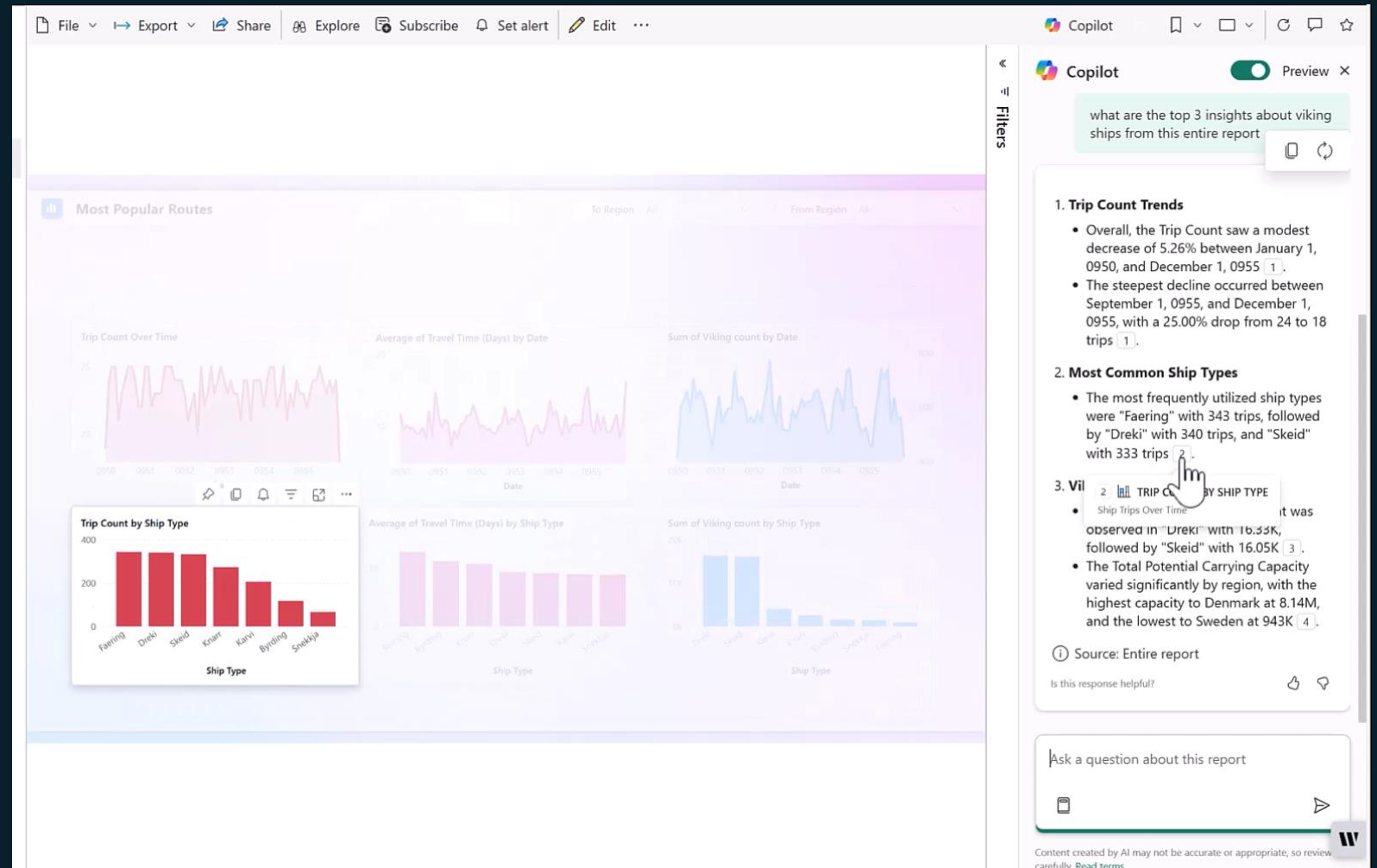
Q&A visual	Copilot
<ul style="list-style-type: none">• Copilot doesn't need to be on to use. No premium capacity required.• "One shot" question and answer• Since it's included as part of a report page, it can be used as part of embed• Can be formatted to match the theme of the report	<ul style="list-style-type: none">• Copilot needs to be on to use, premium capacity required.• Support follow up questions• Leverages LLM to improve understandability of the user's question beyond what's already available in Q&A.
<p>Both:</p> <ul style="list-style-type: none">• Leverage Bing, Office, and renames from within the report to find matches to users' question terms.• Respects hidden tables/columns from the model by ignoring these when answering users' questions.• Respects RLS• Receive any enhancements made through Q&A setup (synonyms, hiding tables/columns specifically for Q&A, row labels set, defined relationships)	

Copilot in Power BI

Data Summarization

Use Copilot to find and share insights through dynamic text summaries

- Ask Copilot to find and summarize insights
- Provides a **general overview** of your report either on current page or the entire report
- Customize the output by telling Copilot just what you're looking for



Behind the scenes

Copilot summary answers make use of the following:

- **ONLY what is visualized in the report**
- Slicers and filters must be invoked
- Visual types, legends, headers/foots – report metadata
- Chat history in Copilot for the current session
- Clarifications provided by the user

Copilot does not make use of:

- The semantic model (that is Data Q&A)
 - table, Column or Measure descriptions from the semantic model
 - Code comments in M or DAX editors

Warning: there are data limits!

- **75 visuals**
- **500 columns in a single visual**
- **30000 rows in a single visual**
- **150000 rows total**

Supported questions: Insights, key themes, and overview summaries

These are **supported** today

“Summarize bike sales in Germany”

where bike sales and region are already columns in the data, AND the data is showing Germany (note if region is a slicer, slicers must be applied)

“What were the top 5 selling products in North America last month?”

where product, region, and date are already columns in the data, and Copilot helps with top N filtering to produce the visual.

“Tell me the average price of gasoline per gallon over the last 30 days.”

where price per gallon is a measure already contained in the model, and Copilot helps by taking the average and filtering by relative date to produce the visual.

Unsupported questions: Diagnostic and analytical capabilities

Coming soon but **NOT supported** today

Generate new insights like anomaly detection, forecasting, or finding key influencers

"Show me the difference in performance between sales in Europe and in America over time"

Comparisons

"Why do our sales go down every July?"

Trends and anomaly detection and explanations

"How many books do you think we will sell next year?"

Forecasting capabilities

Best practices for improving Copilot quality

Best practices for summaries



Make sure your visuals are clean.

Good naming conventions, clear legends, and friendly measure and axis names go a long way with allowing Copilot to understand your prompts and provide quality responses.



Leverage hidden visuals.

Copilot does take into account hidden visuals and hidden pages. If you don't want to make something apparent on the page, you can hide a visual and still have it be included in the eligible responses. (tables are a great trick for this).



Respect data limits.

Ensure that any visuals you want summarized / leveraged in answers are under the visual data limit.



Provide tips.

Leverage the narrative visual with Copilot to give end users a broad overview with a custom prompt, and advise them on where they should start their exploration process.

Top tips for improving Conceptual Schema for Copilot

Exclude tables or columns you don't wish Copilot to use

For example, you may want to use this feature to specify which date table or column to prefer when answering the question. Ship date vs. Order date.

Rename tables and columns to be user friendly and unambiguous

Table names like *StoreInfo* -> Store and *Product List* -> Products will work better.

Use key columns to ensure TopN filters behave as expected

Split formatted columns

For example, a **Full Address** column that contains the address, city, and country/region, you should also split it into Address, City, and CountryRegion columns so your users can query against them individually.

Ensure data has the correct data category (e.g. date / geography)

Provides additional input beyond data type for Copilot to pick the right visual type and understanding a term like "count customers in Brown" brown pertains to a city not a hair color.

Add synonyms for column names

- Copilot in Q&A setup can also suggest synonyms for you to quickly review and add
- Turn on "Synonym sharing" for your org to reuse in other models

Conceptual Schema Best Practices

For the full list of modeling best practices for Copilot:

- [Best practices to optimize Q&A - Power BI | Microsoft Learn](#)
- [Update your data model to work well with Copilot for Power BI - Power BI | Microsoft Learn](#)

For improving model performance:

[Optimization guide for Power BI - Power BI | Microsoft Learn](#)

For general guidance of modeling best practices:

[Understand star schema and the importance for Power BI - Power BI | Microsoft Learn](#)

Linguistic Schema Set Up

Working with Q&A setup:

- [Intro to Q&A tooling to train Power BI Q&A \(preview\) - Power BI | Microsoft Learn](#)
- [Teach Q&A to understand questions and terms in Power BI Q&A - Power BI | Microsoft Learn](#)

In depth training series:

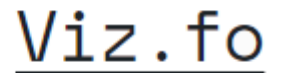
<https://www.youtube.com/@naturallanguageforpowerbi8484>

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