

Leveraging Large Language Models with Power BI

June 25th, 2025

About Me

Experience

- 11+ years with Microsoft BI stack
- 8+ years with PowerPivot/Power BI
- 5+ years with Azure DevOps

Contact Me

 @JKerski

 [John Kerski](#)

 [Blog](#)

Credentials

- MCSE: Productivity
- MS: PBI Data Analyst
- PMP



John Kerski



Slides:



Agenda

- The Challenge
- Scenarios
 - GitHub Copilot
 - Azure OpenAI
 - Copilot in Fabric
- Lessons Learned

The Challenge



The Challenge (cont.)



Scenario 1



Scenario

What was the table this was merged with?

What column was removed?

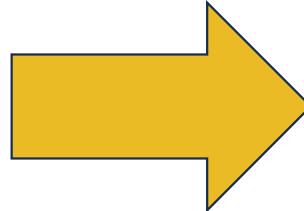
What column was added?

APPLIED STEPS

- Source
- Changed Type
- Split Column by Delimiter
- Changed Type1
- Added Custom
- Replaced Value
- Removed Columns
- Merged Queries
- Expanded DateDim
- Removed Columns1
- Renamed Columns
- Sorted Rows
- Removed Columns2
- Merged Queries1
- Expanded EyeColorDim
- Removed Columns3
- Merged Queries2
- Added Custom1
- Changed Type2
- Added Custom2
- Added Custom3
- Expanded AlignmentDim
- Renamed Columns2
- Removed Columns4
- Renamed Columns1
- Changed Type3
- ✕ Sorted Rows1

Comment Your Code

Manual Commenting Code



Prerequisites

- [GitHub Copilot](#)
- PBIP Format

GitHub CoPilot Prompts

You are an assistant to help Power Query developers comment their code. Please update each line of code by performing the following:

- 1) Insert a comment above the code explaining what that piece of code is doing.
- 2) Do not start the comment with the word Step or a number
- 3) Do not copy code into the comment.
- 4) Keep the comments to a maximum of 225 characters.

You are an assistant to help Power Query developers comment their code.

Please update each line of code by performing the following:

- 1) Update the variable name explaining what that piece of code is doing.
- 2) The variable name should always start with a verb in the past tense.
- 3) The variable name should have spaces between words.
- 4) Please keep the variable to a maximum of 50 characters.
- 5) The variable name should be wrapped in double quotes and preceded by the '#'

You are an assistant to help Power Query developers comment their code. Please update each line of code by performing the following:

- 1) Insert a comment above the code explaining what that piece of code is doing.
- 2) Do not start the comment with the word Step or a number
- 3) Do not copy code into the comment.
- 4) Keep the comments to a maximum of 225 characters.

Please also update each line of code by performing the following:

- 1) Update the variable name explaining what that piece of code is doing.
- 2) The variable name should always start with a verb in the past tense.
- 3) The variable name should have spaces between words.
- 4) Please keep the variable to a maximum of 50 characters.
- 5) The variable name should be wrapped in double quotes and preceded by the '#'

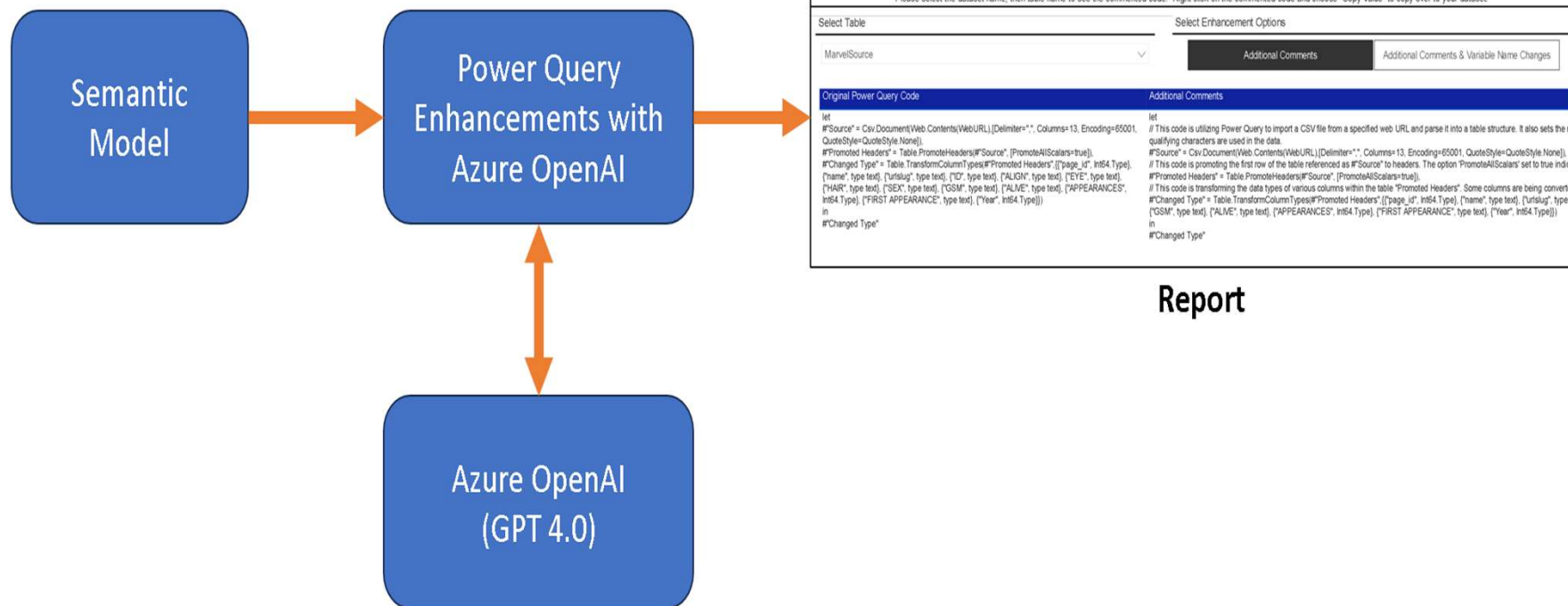
Scenario 2



Scenario 2 - Prerequisites

- Premium, Premium Per User or Fabric Workspace
 - Requires XMLA connection
- Azure OpenAI
 - A ChatGPT 4.0 model deployed. Instructions can be followed [at this link](#).
 - GCC
 - [Federal-Business-Applications/whitepapers/copilot at main · microsoft/Federal-Business-Applications \(github.com\)](#)

DEMO



<https://github.com/kerski/pbi-pq-commenter-with-azure-openai/tree/main>

Scenario 3



Scenario 3 - Prerequisites

- [Enable Copilot in Fabric](#)

Prompts

Generate a test case for each measure with the following columns:

- 1) TestName - This should describe the test conducted and be less than 255 characters
- 2) ExpectedValue - The expected value for the test.
- 3) ActualValue - The actual value returned from the DAX query.
- 4) Passed - A boolean value that compares ExpectedValue and ActualValue

The test should compare a static value with the measure to see if they match.

Generate a test case for each table that checks the table has more than zero rows using the COUNTROWS function. The output should contain following columns:

- 1) TestName - This should describe the test conducted and be less than 255 characters
- 2) ExpectedValue - The expected value for the test.
- 3) ActualValue - The actual value returned from the COUNTROWS function.
- 4) Passed - A boolean value that compares ExpectedValue and ActualValue

Lessons Learned

Lessons Learned - Prompts

ChatGPT Prompt Engineering for Developers

You are an assistant to help Power Query developers comment their code.

Please take the code between the `` ` `` in the following:

- 1) Return a comment explaining what that piece of code is doing.,*
- 2) Do not start the comment with the word Step or a number,*
- 3) Do not copy code into the comment.*
- 4) Keep the comments to a maximum of 225 characters.*

`` `[Code] ` ``



Set the premise



Indicate markers



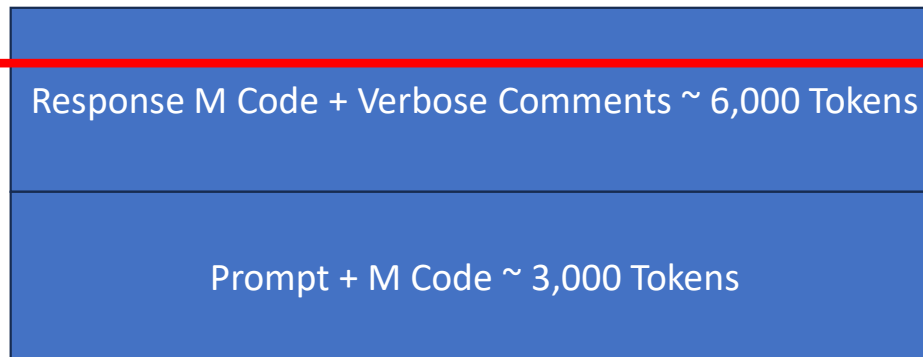
Set boundaries

Lessons Learned (cont.)

Token Limits

- 1 token \sim 4 chars in English
 - By Model - [Microsoft Documentation](#)

8,000 Token Limit

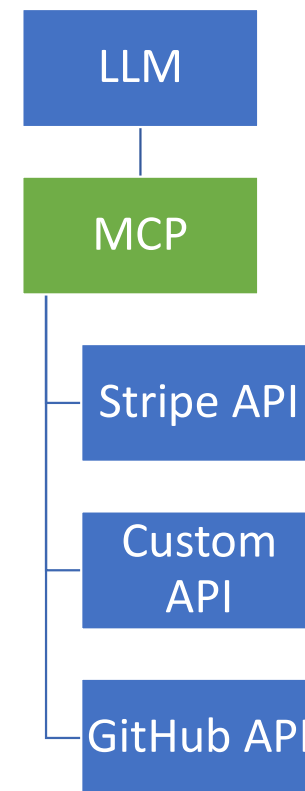
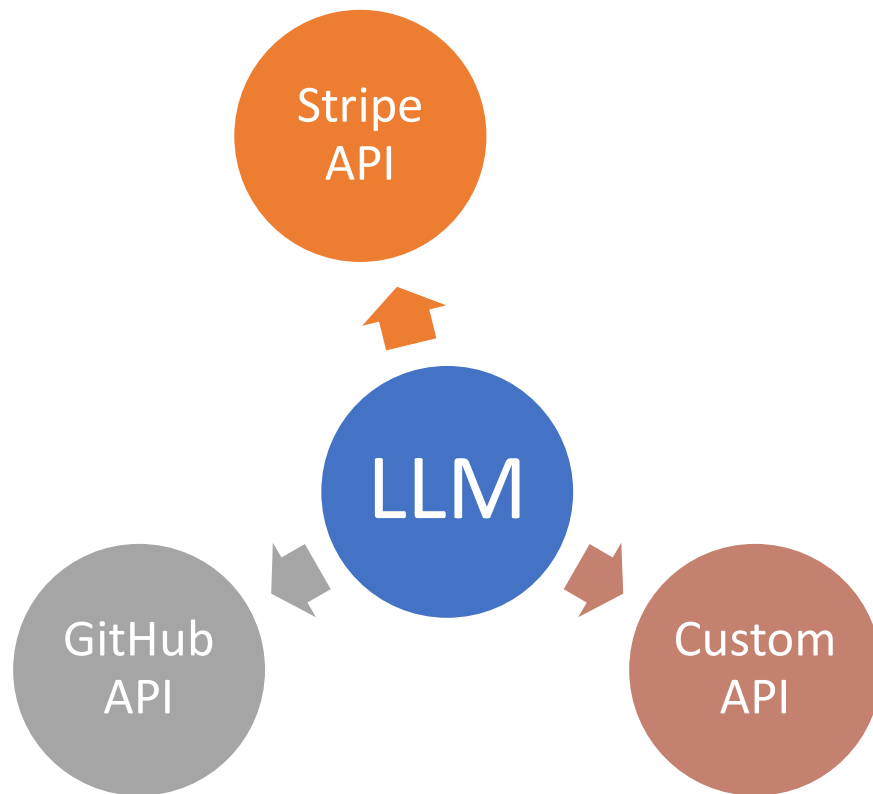


Strategies - [Greg Kamradt](#)

Security Considerations

- [Data, privacy, and security for Azure OpenAI Service](#)
- Protect the Key
 - [Vote Microsoft make this easier](#)
- Make this Easier
 - [Power Query Commenting with Co-Pilot/Large Language Models](#)

Model Context Protocol (MCP)



Thank you

Contact Me

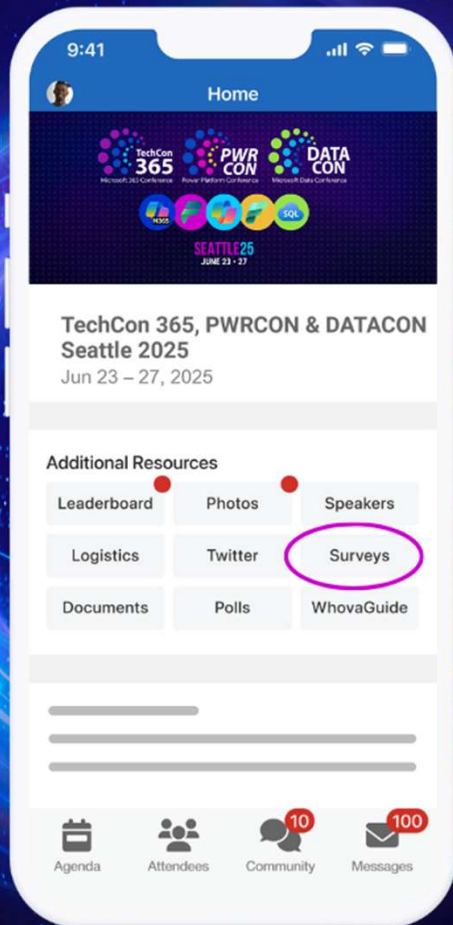
X @JKerski

in John Kerski

 Blog

Slides:





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