

Start with PowerBI

"From Rookie to Rock"

Learn &  
Practice

# Power BI project with AI

Part 2: Connect Power BI to an API using AI



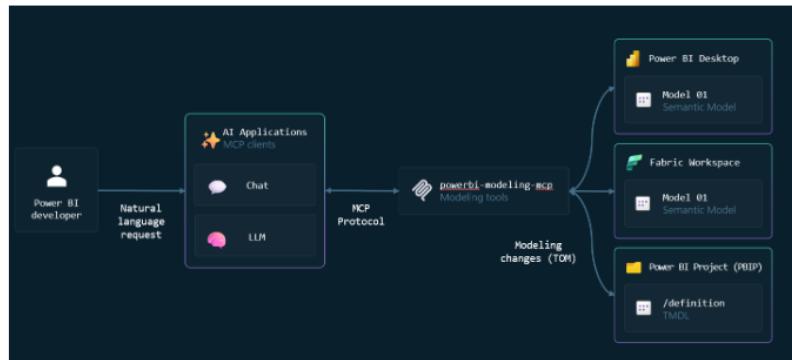
# Power BI project with AI

## About MCP server



### Power BI Modeling MCP Server (Preview)

The [Model Context Protocol \(MCP\)](#) is an open standard that enables AI agents to securely connect with tools and services. The Power BI Modeling MCP Server brings Power BI semantic modeling capabilities to your AI agents through a local MCP server. This allows developers and AI applications to interact with Power BI models in entirely new ways, from using natural language to execute modeling changes to autonomous AI agentic development workflows.



## November Power BI update (Microsoft information)

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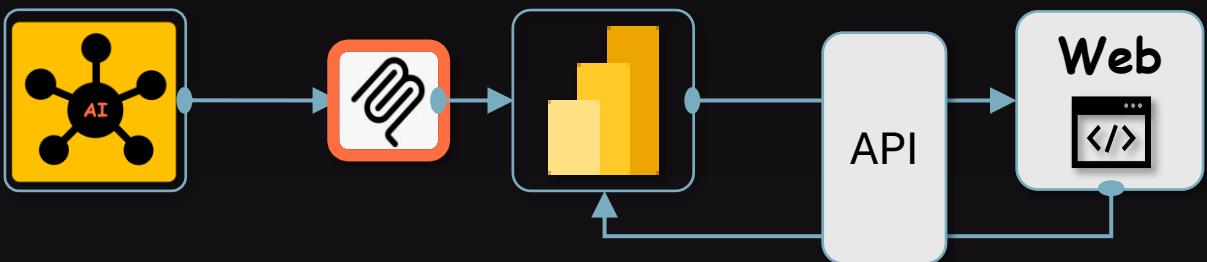
# Power BI project with AI

## The steps



The challenge is to build a Power BI project (almost entirely) with AI. In this project, the AI's role is to connect to a website's API to access the data, then prepare and create the data model with its associated metrics.

The compelling story to be told with the data will be told by humans, because that's my favorite part!



### Resources on GitHub

[Patou-Tips/#52 Patou Tips \(Quick guide to develop faster with TDML\) at main · PatouTips/Patou-Tips](#)

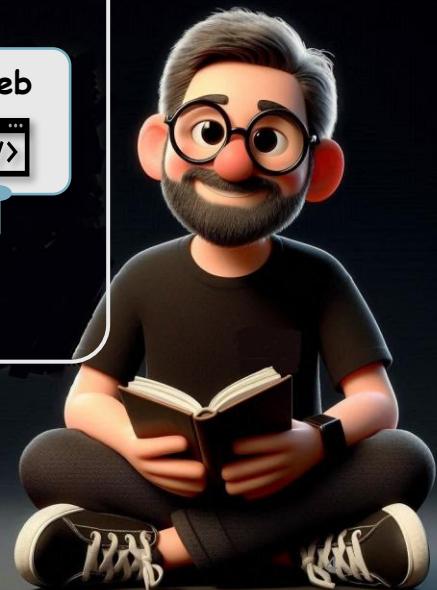
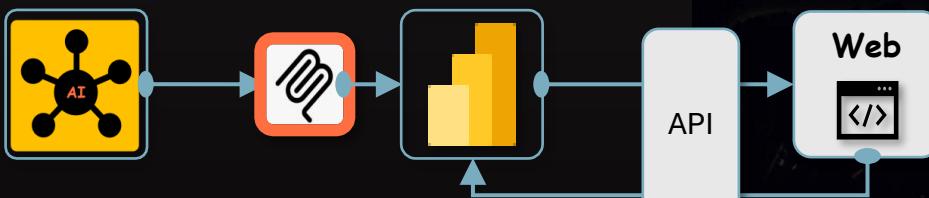
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# Power BI project with AI

## Part 2

### Connect Power BI to an API using AI



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# Power BI project with AI

## Connect Power BI to an API using AI



With the MCP Server extension, tasks that previously required coding and significant time are now easily accomplished, such as **connecting Power BI to a website's API**.

The challenge is to extract data from the very interesting "**open FOOD facts**" website and create the table in Power BI from this data, **using a single prompt**.

📌 Note: In this example, the connection is made to a completely free website that doesn't require registration to obtain a token.

The screenshot shows the homepage of openFOODfacts.org. At the top, there is a navigation bar with 'Country' and 'English' dropdowns. The main header features the 'openFOODfacts' logo and a search bar with a magnifying glass icon. Below the header, a large green banner reads 'HELP US INFORM MILLIONS OF CONSUMERS AROUND THE WORLD ABOUT WHAT THEY EAT'. Underneath the banner is a group photo of many people. To the right of the banner, there is a sidebar with a 'Please' button, a 'Your donations' section listing goals like 'keeping our data open', and a 'deductible à don de 20€' button. The central content area has sections for 'Discover' (describing the database as open data for better food choices) and 'Contribute' (inviting users to add products, available on various platforms). A globe icon with a magnifying glass is also present.

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## Connect Power BI to an API using AI



The website "open FOOD facts" offers excellent documentation on the API for retrieving the data.

The screenshot shows a web browser window with the following details:

- Address Bar:** open food facts - Product Opener (Open Food Facts Server)
- Toolbar:** GitHub icon, v2.83.0, 887, 511
- Left Sidebar (API Documentation):**
  - Product Opener (Open Food Facts Server)
  - Product Opener (Open Food Facts web server) documentation
  - API:**
    - Introduction to Open Food Facts API documentation
    - Introduction to the Robotoff Project
    - Tutorials for Common developer journeys
    - Tutorial on using the Open Food Facts API
    - Tutorial on uploading images to the Open Food Facts API
    - How to download product images
    - Explanation on Knowledge panels
    - Explanation on Product Attributes
    - Reference: API and product schema change log
    - Reference: Barcode Normalization
    - Reference: API CheatSheet
    - Reference OpenAPI documentation for API v2
    - Reference OpenAPI documentation for API v3
    - Open Food Facts AWS Images dataset
    - How to leverage links to Wikidata (and Wikipedia)
- Main Content Area:**

## Introduction to Open Food Facts API documentation

Everything you need to know about Open Food Facts API.

**[CAUTION]** Are you going to use our API? Please read this documentation [entirely](#) before using it.

### Overview

Open Food Facts is a food products database made by everyone, for everyone, that can help you make better choices about what you eat. Being open data, anyone can reuse it for any purpose.

The Open Food Facts API enables developers to get information like ingredients and nutritional values of products, and even add more *facts* to the products database. You can use the API to build applications that allow users to contribute to the database and make healthier food choices.

**The current version of the API is 2.**

Data in the Open Food Facts database is provided voluntarily by users who want to support the program. As a result, there are no assurances that the data is accurate, complete, or reliable. The user assumes the entire risk of using the data.

**The next version of the API is 3.**

This version is in active development and may be subject to frequent changes.

### Before You Start

  - The Open Food Facts database is available under the [Open Database License](#).
- Right Sidebar (Table of Contents):**
  - Table of contents
  - Overview
  - Before You Start
  - How to Best Use the API
    - General principles
    - Rate limits
    - If your users do not expect a result immediately (e.g., Inventory apps)
    - If your users expect a result immediately (e.g., Nutrition apps)
  - API Deployments
  - Authentication
  - Reference Documentation (OpenAPI)
  - Tutorials
  - Help
  - SDKs

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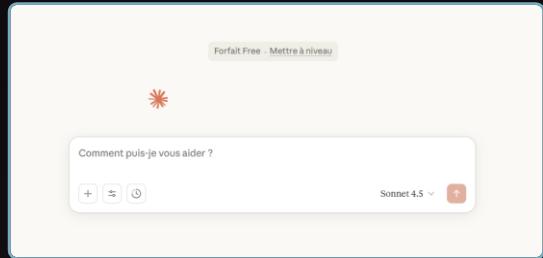
# Power BI project with AI

## Connect Power BI to an API using AI



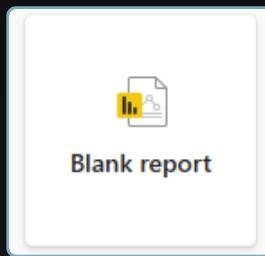
Regarding previous installations such as the "MCP Server for Power BI" extension via Visual Studio Code and the Claude AI desktop, as well as all settings, see Patou Tips number XX.

- 1 Lauch Claude AI desktop



- 2 Create a new PowerBI file and let it open.

In this example, the Power BI file is named "Test API".



# Power BI project with AI

## Connect Power BI to an API using AI



### Prompt

- 3 Can you complete the following three steps:
- 1 - Connect to the open Power BI file named "Test API"
  - 2 - Connect to the OPEN FOOD FACT website via an API
  - 3 - Create the query in Power Query and load the data into a table

Can you complete the following three steps:  
1 - Connect to the open Power BI file named "Test API"  
2 - Connect to the OPEN FOOD FACT website via an API  
3 - Create the query in Power Query and load the data into a table

I'll help you complete these three steps. Let me start by connecting to the Power BI file and then setting up the Open Food Facts API connection.

#### Step 1: Connect to the Power BI file

Let me first check for available local Power BI Desktop instances:

P Connection operations

Great! I found the "Test API" Power BI file. Now let me connect to it:

P Connection operations

Step 1 Complete: Connected to "Test API" Power BI file

Step 2 & 3: Create Open Food Facts API Query in Power Query

The actions performed by Claude appear; Claude may ask you at a certain stage for permission to access your resources or files in order to continue the entire operation.

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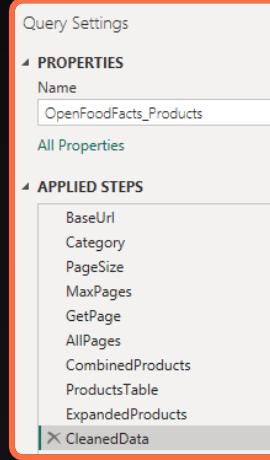
# Power BI project with AI

## Connect Power BI to an API using AI

The connection was established thanks to "Claude AI", who created all the operations in PowerQuery and the table in Power BI.

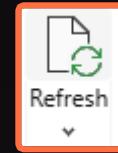
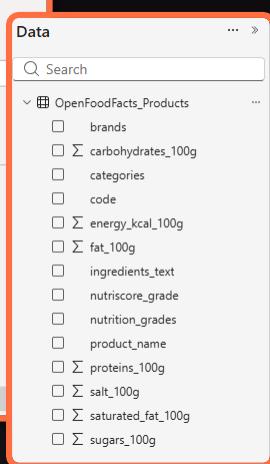
### PowerQuery

4

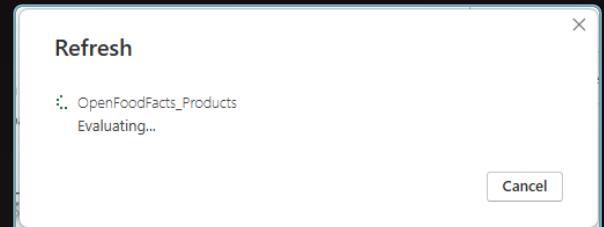


### PowerBI

5



The connection is created and reusable. You can refresh the project as many times as needed.



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9

# Power BI project with AI

## Wrap-up about capabilities



At this stage of the project, we can make the following recommendations regarding the use of AI with Power BI.

Capabilities	Recommendations
Build and modify semantic models with natural language	<ul style="list-style-type: none"><li>→ The prompt should be very detailed and the DAX calculations should be verified.</li><li>→ Creating a "measure" folder and storing all measures in it is possible. Placing the "measures" folder outside of the tables seems not possible (for me!).</li></ul>
Perform bulk modeling operations at scale	Next Patou Tips
Apply modeling best practices	<ul style="list-style-type: none"><li>→ Ideal for connecting complex sources, such as APIs</li></ul>
Leverage agentic workflows	Next Patou Tips
Query and validate DAX expressions	<ul style="list-style-type: none"><li>→ Calculations should be verified.</li></ul>

Coming soon, in 2026!



Patrice Fayard

# Business Intelligence WORKBOOK

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## Learn & Practice

- ✓ 1000 Video tutorials
- ✓ 500 Step by step
- ✓ 5 Cheat Sheet
- ✓ 100 Power Patou Tips
- ✓ Hacking & Workshops



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Over 500 pages to learn and practice: video tutorials and resources

# Learn and practice

Find past issues of "Patou Tips" and download resources to practice on GitHub



Easy to do it...

Patou Tips #5



Create a **Customized Chart** (for income statement)



To practice downloadable free resources in GitHub



**Patou Tips #5**  
Create a  
Customized  
Chart  
(for income  
statement)

Easy to do it...

Patou Tips #6



Create  
**Customized Icon**



(with PowerPoint for PowerBI)



**Patou Tips #6**  
Create  
Customized Icon

Easy to do it...

Patou Tips #7



Create an **Age Pyramid Chart** (for Human Ressources)



To practice downloadable free resources in GitHub



**Patou Tips #7**  
Create an Age  
Pyramid Chart  
(for Human  
Ressources)

Easy to do it...

Patou Tips #12



Calculate the correct evolution for KPI



**Patou Tips #12**  
Calculate right  
evolution for  
KPI

Patou Tips #23



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9 tips explained step by step to practice

Quick Guide Visualization & Storytelling



**Patou Tips #23**  
Quick Guide Visualization &  
Storytelling



**Resources on GitHub**  
<https://github.com/Patou-Tips/Patou-Tips>

Don't forget!

This isn't the truth, it's just my truth!

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