

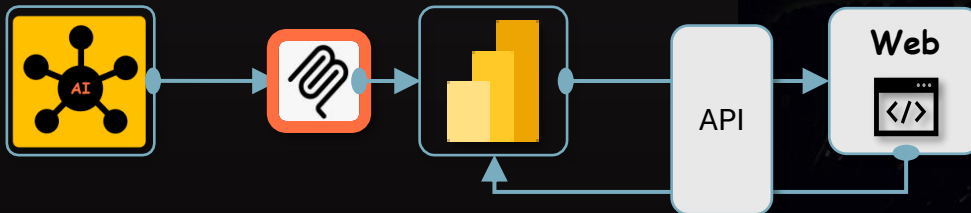
Start with PowerBI

"From Rookie to Rock"

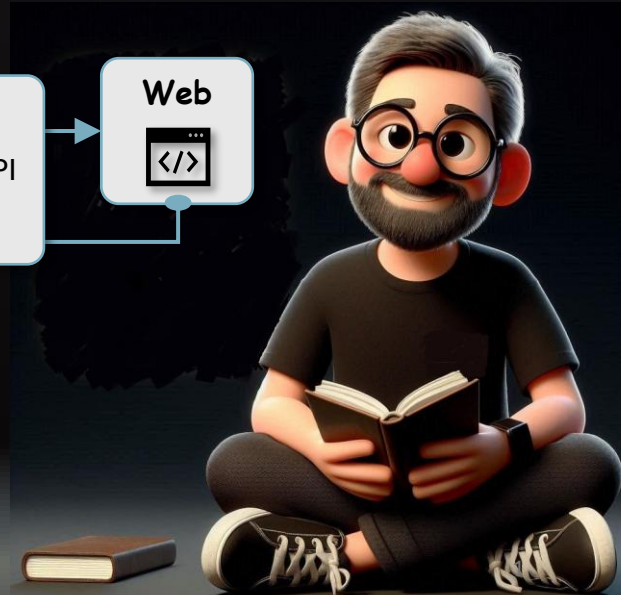
Learn &  
Practice

# Power BI project with AI

Part 2: Connect Power BI to an API using AI



Patou Tips #55



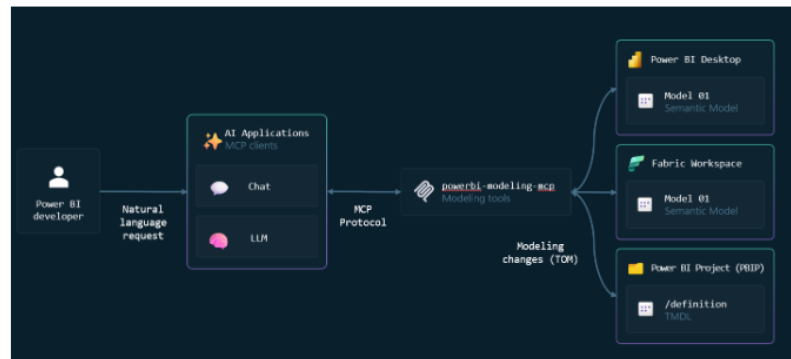
# Power BI project with AI

## 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.



#### Capabilities

- **Build and modify semantic models with natural language:** Create or update tables, columns, measures, relationships and much more simply by describing what you need.
- **Perform bulk modeling operations at scale:** Rename, refactor, translate, or document hundreds of model objects in seconds.
- **Apply modeling best practices:** Easily evaluate and implement modeling best practices.
- **Leverage agentic workflows:** Work with Power BI Project files and TMDL code, enabling AI agents to autonomously plan and execute complex modeling tasks.
- **Query and validate DAX expressions:** Run DAX queries or validate measures directly through AI-driven workflows.

November  
Power BI  
update  
(Microsoft  
information)

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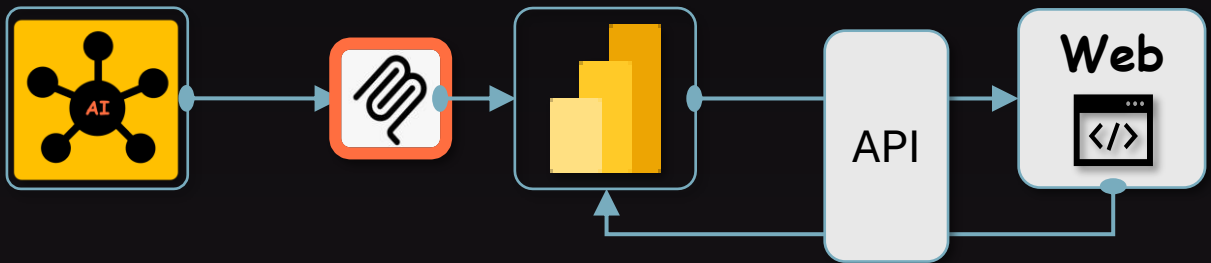
# Power BI project with AI

## 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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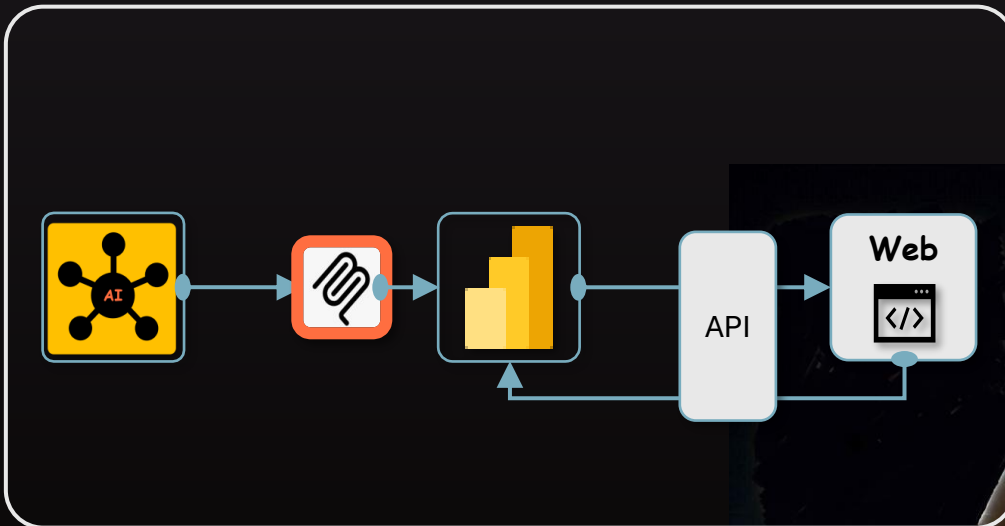
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# Power BI project with AI

## Part 2

## Connect Power BI to an API using AI



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# Power BI project with AI

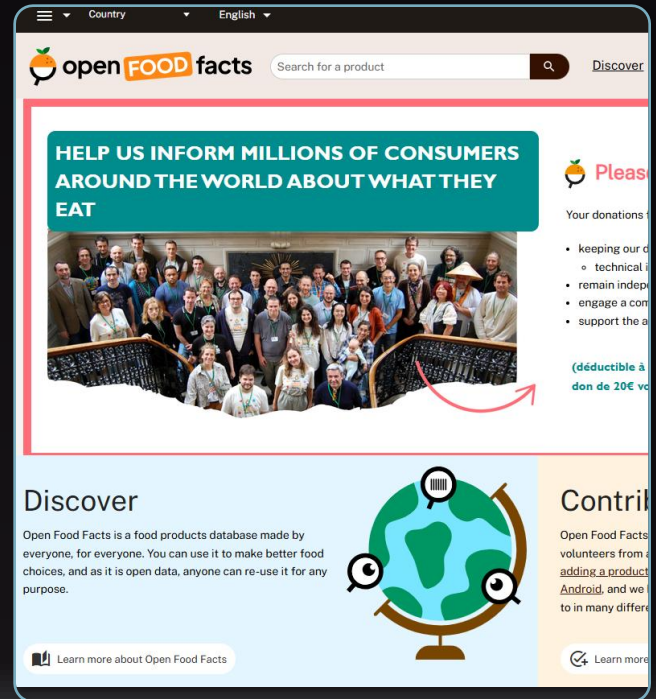
## Connect Power BI to an API using AI



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.



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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 the Open Food Facts API documentation website. The header includes the 'open food facts' logo, the title 'Product Opener (Open Food Facts Server)', a search bar, and a GitHub link. The left sidebar contains a navigation menu with categories like 'Product Opener (Open Food Facts Server)', 'Product Opener (Open Food Facts web server) documentation', 'Api', and various tutorials and references. The main content area is titled 'Introduction to Open Food Facts API documentation' and includes a warning about reading the documentation before using the API, an overview of the API's purpose and capabilities, and information about the current and next versions of the API. The right sidebar contains a 'Table of contents' with links to various sections of the 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)

### 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](#).

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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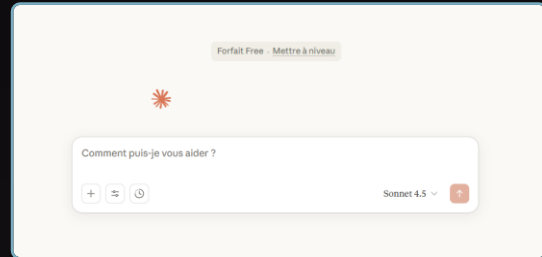
# Power BI project with AI

## Connect Power BI to an API using AI



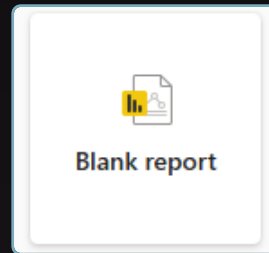
Regarding previous installations such as the "MCP Server for Power BI" extension via Visual Studio Code and the Claude AI desktop, as well as all settings, see Patou Tips number XX.

### 1 Launch Claude AI desktop



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

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



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# Power BI project with AI

## Connect Power BI to an API using AI



3

### Prompt

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

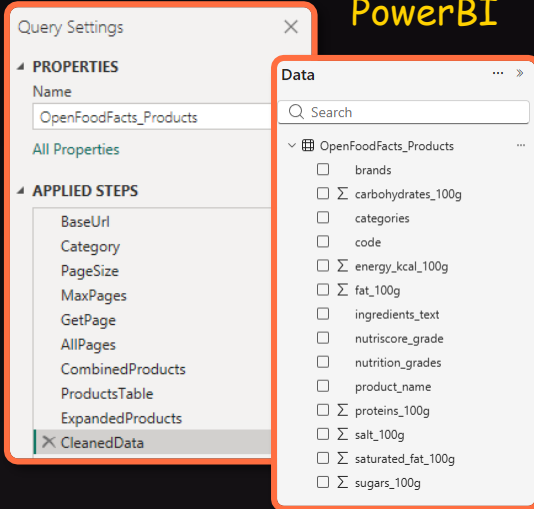


The connection was established thanks to "Claude AI", who created all the operations in PowerQuery and the table in Power BI.

### PowerQuery

### PowerBI

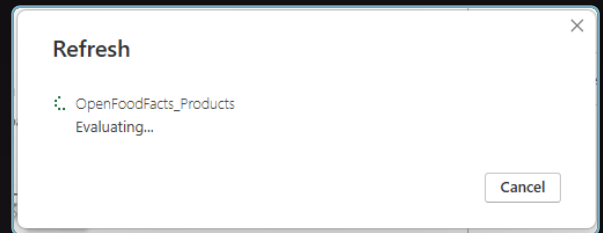
4



5



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



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# 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	→ Ideal for connecting complex sources, such as APIs
Leverage agentic workflows	Next Patou Tips
Query and validate DAX expressions	→ Calculations should be verified.

Coming soon, in 2026!



Patrice Fayard

# Business Intelligence WORKBOOK

Start PowerBI

"From Rookie to Rock"

## Learn & Practice

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



To develop your knowledge, find more explanations and exercises

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



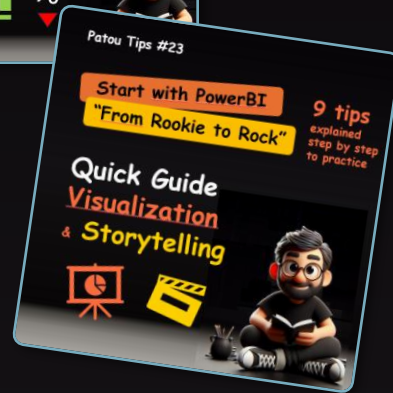
**Patou Tips #5**  
Create a  
Customized  
Chart  
(for income  
statement)



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



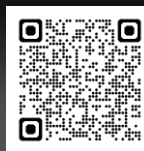
**Patou Tips #6**  
Create  
Customized Icon



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



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



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

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

## Patou Tips



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