

AI Builder – my experiments (notes & demos)

Courtesy of Piotr Rusak (<https://www.linkedin.com/in/piotr-rusak/>)

Demo 1

Power Apps Maker - show how to switch Preferred solution and create PROMPT quickly

Preferred solution switch is a trick how to store all resources inside you current DEV solution.

Demo 2

(1) Create PROMPT to analyze Document Content and extract it as JSON (will be used in next Demo)

PROMPT

From the OCR captured Invoice document text provided between [Start of text] & [End of text] markers, extract data for each of the example JSON fields between [Start example JSON] & [End example JSON].

Be aware, OCR text may contain errors like wrong characters or missing formatting.

In the JSON output, replace [data] with each field's extracted data text using only string datatypes. Use a string value of "N/A" when the field's data text is not found in the document text provided.

Convert all numbers to a standard 2-place decimal notation.

Convert all dates to international format "yyyy-mm-dd". For example, dates in the document text may start as something like 18.05.2024 or 3/21/2025, and need to be converted to 2024-05-18 & 2025-03-21 respectively.

Represented each data value as a string type.

There may be any number of Order Lines.

[Start example JSON]

```
{  
  "Invoice Date": [data],  
  "Invoice Number": [data],  
  "Delivery or Ship Address": [data],  
  "Invoice Total Price": [data],
```

```
"Order Lines": [  
    {  
        "Position": [data],  
        "Product Name": [data],  
        "Product Quantity": [data],  
        "Product Unit Price": [data],  
        "Product Total Price": [data],  
    },  
    {  
        "Position": [data],  
        "Product Name": [data],  
        "Product Quantity": [data],  
        "Product Unit Price": [data],  
        "Product Total Price": [data]  
    }  
]
```

[End example JSON]

[Start of text]

HERE-DYNAMIC-PARAM-FOR-PROMPT

[End of text]

Return only the final JSON object. Do not return any other output descriptions or explanations, only the JSON object.

(2) Show Advanced options for PROMPT engineering

Model & Temperature change (AI Builder preview models in Settings of the Env)

The screenshot shows the 'Settings' section of the AI Builder interface. Under the 'Model' heading, it says 'Model used for generating responses. Each model has different licensing.' with a link to 'Learn more on model selection'. A dropdown menu is open, showing 'GPT 3.5 (default)' as the selected option. Below this, the 'Temperature' section is shown, with a note that lower temperatures lead to predictable results and higher temperatures allow for more diverse or creative responses, accompanied by a link to 'Learn more on temperature'. A horizontal slider is present, with the value set to 0.

Data from DV table usage

The screenshot shows the 'Data used (preview)' section. It displays a list item for 'Account'. Below it, there is a 'Filter attribute' section with a dropdown menu labeled 'Select the table attribute you want to filter on'. Underneath is a 'Filter value' input field with a button to '+ Add value'.

Demo 3

XRM ToolBox - <https://www.xrmtoolbox.com/>

SQL 4 CDS - show AI Model results

Templates inside Environment (not all visible to our eyes)

```
SELECT msdyn_aitemplateid, msdyn_istrainablename, msdyn_uniquename,  
msdyn_resourceinfo FROM msdyn_aitemplate
```

```
order by msdyn_istrainable desc, msdyn_uniquename asc
```

Models

```
SELECT msdyn_aimodelid, msdyn_name,  
msdyn_sharewithorganizationoncreatename, msdyn_templateidname from  
msdyn_aimodel  
  
order by msdyn_sharewithorganizationoncreatename desc,  
msdyn_templateidname asc, msdyn_name asc
```

Demo 4

XRM ToolBox - <https://www.xrmtoolbox.com/>

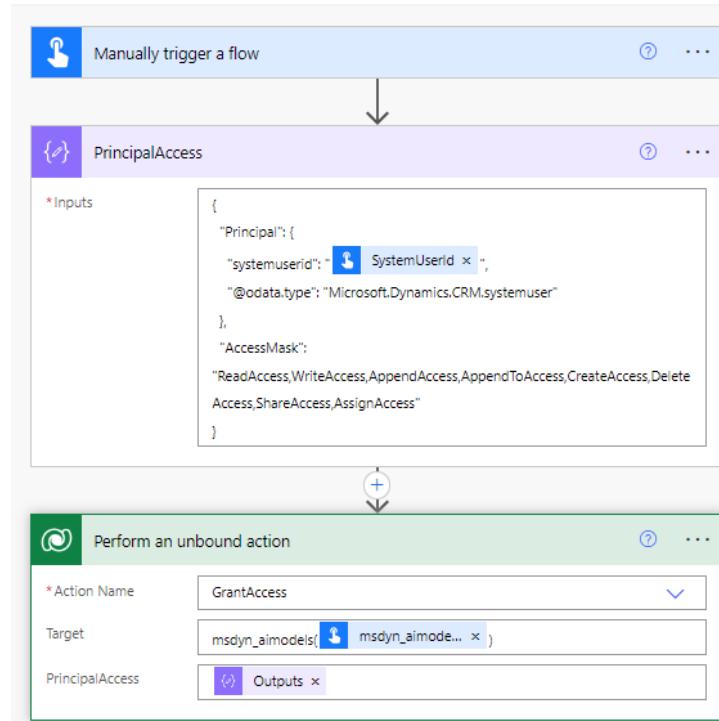
PAC CLIX - show pac cli tool and how to install “Power Automate document automation base kit”

Demo 5

Share prompt create with other owner

Use SQL 4 CDS to grab SystemUser ID

```
Select systemuserid, fullname, domainname, internalemailaddress from  
systemuser where domainname like '%Vance%' and accessmodename =  
'Read-Write'
```



Demo 6

Use AI Sentiment prompt in Canvas App / Flow / Dataverse API

- + Build sample Canvas App – present []
- + Sample flow – present []
- + Sample call to REST API – using Dataverse REST Builder (either XrmToolBox tool or solution - <https://github.com/GuidoPreite/DRB/releases/tag/1.0.0.43>)

Demo 7

Document Automation Toolkit – demo

AI Model used - Invoice processing

AI Model must be published – cannot work on Dev environment (as in Dev Environment publishing AI Models is blocked!)

Sending Invoices to mailbox with specific Subject

Kick off Power Automate flow monitoring Inbox of specific mailbox

3 Flows:

Document automation base kit > Cloud flows

Display name ↑	Name ↓	Type
1 Document Automation Email Importer	Document Automation Email Importer	Cloud Flow
2 Document Automation Processor	Document Automation Processor	Cloud Flow
3 Document Automation Validator	Document Automation Validator	Cloud Flow

- (1) Document Automation Email Importer – flow responsible for monitoring mailbox and saving PDF attachments in Dataverse Table
- (2) Document Automation Processor – flow reacting on changes in DV table storing PDF documents – processing single Invoice – extracting metadata using AI Model
- (3) Document Automation Validator – flow responsible for validating extracted metadata (counting total score for extraction)

Canvas App – to Validate manually extracted data from Invoices (Documents)

Document Automation

[Documents](#) Configuration

Review the processed documents you have received.

Document List		Status	Refresh
Document Name	Received on	Status	
Contoso 6.pdf	5/22/2024	Extracting Data	

Document Automation

[Documents](#) Configuration

Review the processed documents you have received.

Document List		Status	Refresh
Document Name	Received on	Status	
Contoso 6.pdf	5/22/2024	Validated	

Contoso 6.pdf
Status: Validated

Fields
Tables
Delete Document

amountDue \$49.91	93%	billingAddress 567 Forest St MD 98054	91%	billingAddressRecipient Wingtip Toys	94%
customerAddress [Redacted]	0%	customerAddressRecipient [Redacted]	0%	customerId [Redacted]	0%
customerName Wingtip Toys	94%	dueDate Nov 18, 2021	94%	invoiceDate Nov 03, 2021	94%
invoiceId 1791003	97%	invoiceTotal \$454.66	96%	previousUnpaidBalance [Redacted]	0%
purchaseOrder [Redacted]	0%	remittanceAddress [Redacted]	0%	remittanceAddressRecipient... [Redacted]	0%
serviceAddress [Redacted]	0%	serviceAddressRecipient [Redacted]	0%	serviceEndDate [Redacted]	0%
serviceStartDate [Redacted]	0%	shippingAddress [Redacted]	0%	shippingAddressRecipient [Redacted]	0%
subTotal \$443.79	97%	totalTax \$8.88	97%	vendorAddress 4567 Main St Buffalo NY 90852	91%
vendorAddressRecipient Contoso, Ltd.	94%	vendorName Contoso, Ltd.	94%	Comment [Redacted]	

Back
Validate
Next document

Demo 8

(COMPLEX) - Extract content from PDF using AI Prompt

Extract data from PDF invoice - using Generative-AI (not Document Processing) - no training / no collections - all done in smart and 100% magic way

Solution built by **Tyler Kolota** 

YT Channel => https://www.youtube.com/channel/UC_egEshpBx0XP1D1jXPAclg

Solution or Flow can be downloaded here =>

<https://powerusers.microsoft.com/t5/Power-Automate-Cookbook/Extract-Data-From-PDFs-and-Images-With-GPT/td-p/2201345>

Amazing way of transforming OCR results into pure TXT file (A...mazing)

Then using PROMPT from Demo 2 (see above)

Demo 9

Test Creator Kit AI solution build by Power CAT team.

They built AI Prompts using high standards

Wrapped every AI Prompt with Plugin + Custom API operation !!!

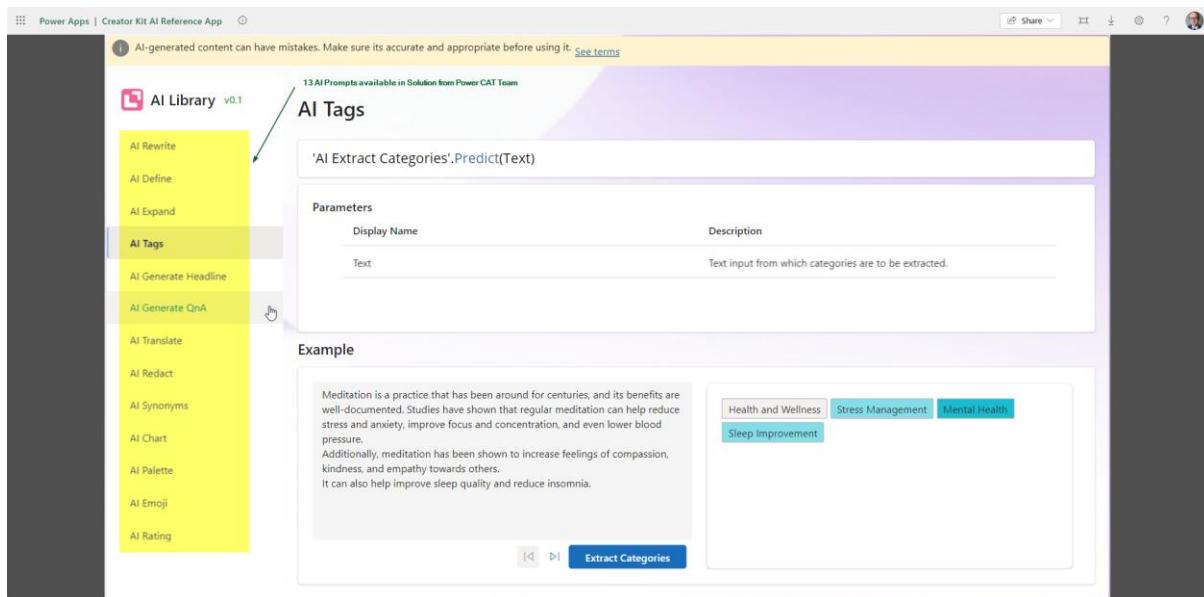
<https://github.com/microsoft/powercat-creator-kit/tree/main>

Install via PAC CLI / App Source or grab source from GITHUB

... or

You can take it from my repo here:

<https://github.com/PRusakPL/Baltic-Meetup-May-2024>



Steal from here the way how to:

- Pack your AI Prompts inside solution
- How to build proper AI Prompts
- They also built 4 custom PCF controls – that you can also re-use in your apps