



Microsoft Power Platform CONFERENCE

POWER BI

POWER AUTOMATE

POWER APPS

POWER VIRTUAL AGENTS

POWER PAGES

AI in your Power Platform Environment

Kylie Kiser

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The official event app for the **Microsoft Power Platform Conference – Fall 2023**



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- ➔ Event documents

Event Invitation Code:
PPCFall2023

Agenda



OVERVIEW OF AI
BUILDER



DOCUMENT
PROCESSING
DEMO & LIVE BUILD



DRIVER'S LICENSE
DEMO



OBJECT
DETECTION



OVERVIEW OF
AZURE AI
SERVICES



FINAL THOUGHTS

Kylie Kiser

5x Microsoft Business Applications MVP

Solution Architect, Dynamics 365 CE at
RSM Canada

10+ Years working with Dynamics and
the Power Platform

Washington, DC User Group Chapter
Leader



KylieKiser.com



[@KylieKiser](https://twitter.com/KylieKiser)



Youtube.com/KylieKiserPowerPlatform



Overview

Key Types of AI

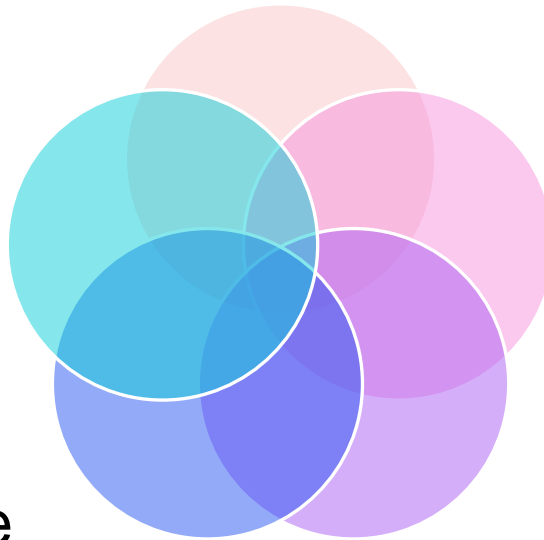
Machine
Learning

Knowledge
Mining

Anomaly
Detection

Natural
Language
Processing

Computer
Vision



Microsoft Power Platform

The low-code platform that spans Office 365, Azure, Dynamics 365, and standalone applications
Innovation anywhere. Unlocks value everywhere.



Power BI

Business analytics



Power Apps

Application development

- Canvas Apps
- Model-driven Apps



Power Pages

Secure business websites



Power Automate

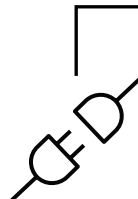
Process automation

- Cloud Flows & Teams Flows
- Business Process Flows
- Desktop Flows



Power Virtual Agents

Intelligent virtual agents



**Data
connectors**

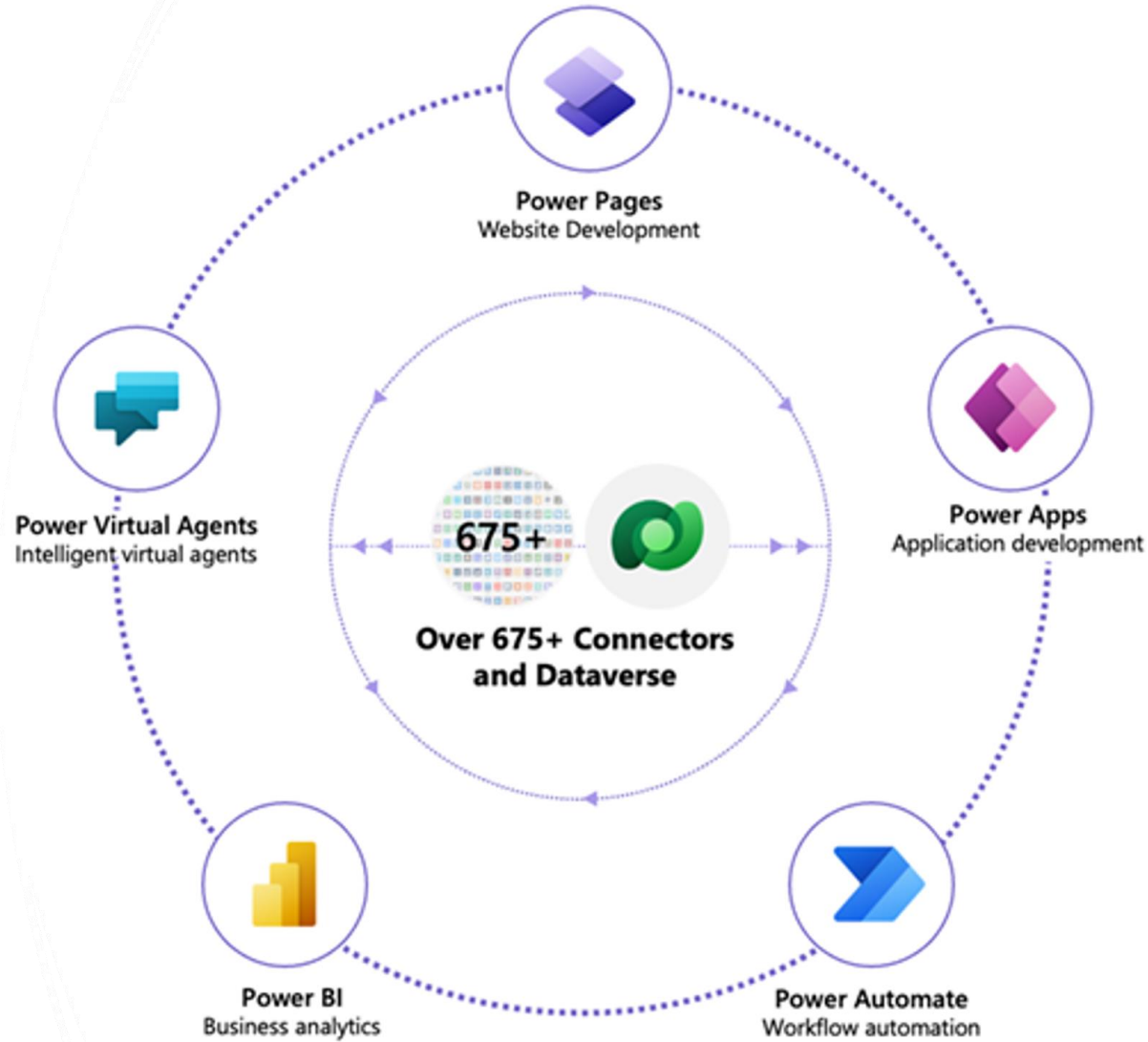


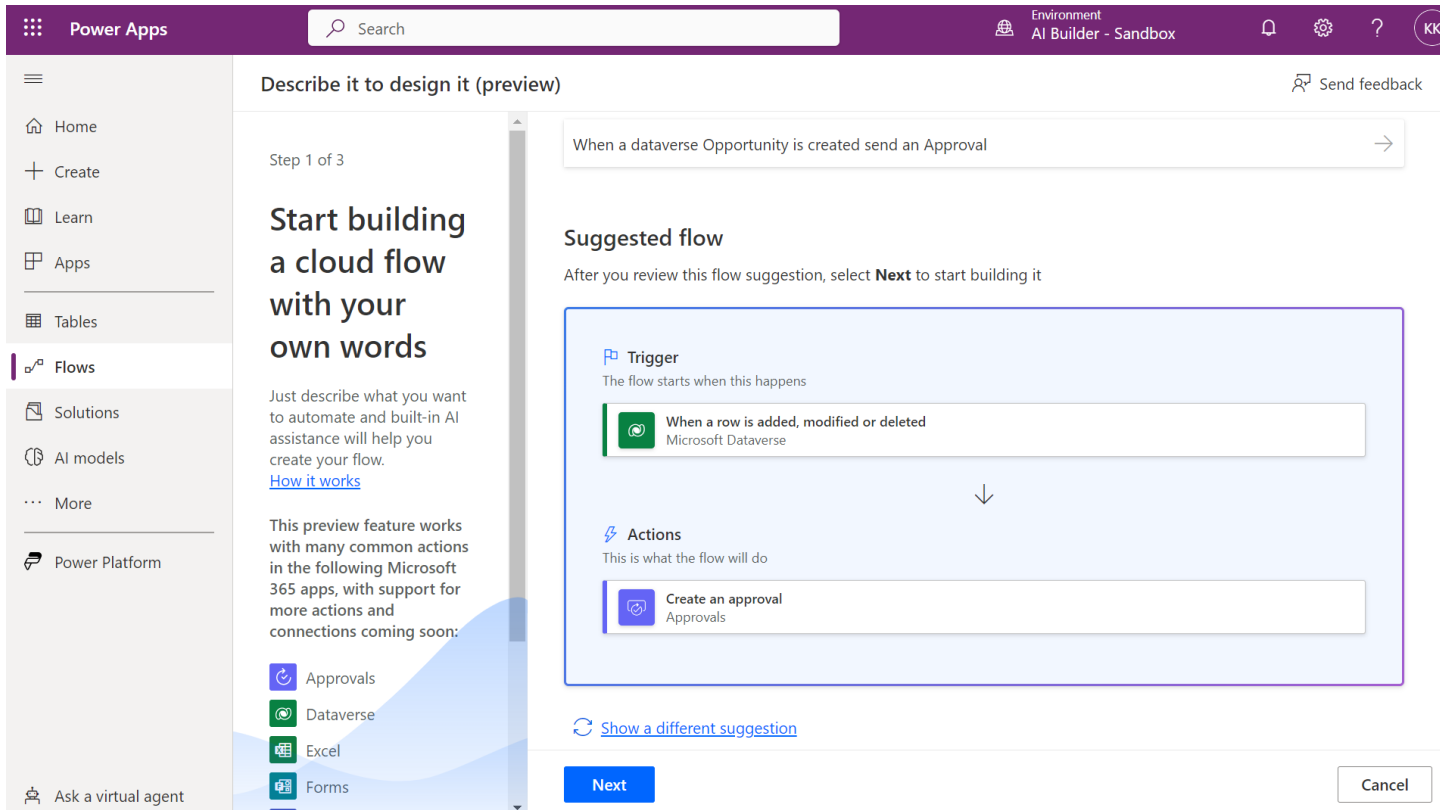
AI Builder



Dataverse

Powerful alone. Even better together.





Using AI to Build in the Power Platform

Power Automate Describe it to Design it (Preview)

Power Apps | Power Fx Test

Environment
AI Builder - Sandbox

Back | Undo | Redo | Insert | Add data | Edit fields | Learn

Items = fx Accounts

Fourth Coffee (sample)	555-0150	>
Litware, Inc. (sample)	555-0151	>
Adventure Works (sample)	555-0152	>
Fabrikam, Inc. (sample)	555-0153	>

Screen1 Gallery1

Ideas

What do you want to do?

sort accounts by address 1 state ascending →

Here are some ideas

💡 Accounts sorted by Address 1: State/Province (ascendingly) [Show less](#)

Apply to: Items

Sort('Accounts', 'Address 1: State/Province', Ascending) 📄

Resources

🔗 Give feedback to Microsoft

Apply Cancel

Legal | Privacy

Using AI to Build in the Power Platform

POWER APP POWER FX IDEAS

AI Builder

Overview

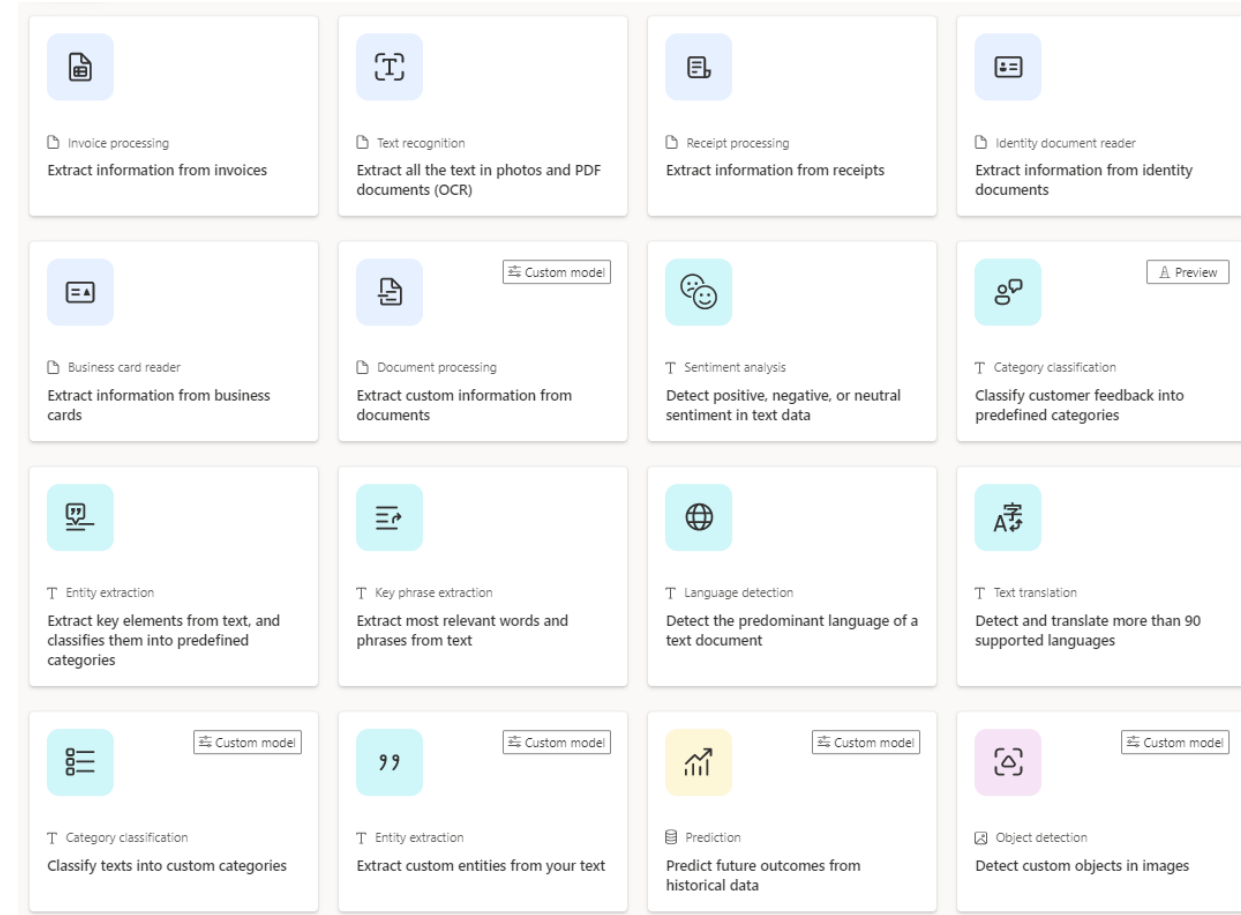
Part of the maker portal that allows the creation of AI models

All point-and-click, no coding needed

Prebuilt models available or custom

Can be integrated with Power Apps or Power Automate

Can be refined and trained further after use



Quick Demo

Creating new AI Builder Model

Using pre-built models in Canvas Apps

- Text Recognition
- Sentiment Analysis
- Key Phrase Extraction
- Entity Extraction
- Language Detection
- Text Translation

All available to use in Power Apps or Flow with no training! Plus, it's Low-Code! (PowerFx)

OpenAI Demo

OpenAI AI Builder Model in a Power App



Create text with AI

Instructions

tell me a sentence that is either a complaint or a praise

Test it out

Response

Sure! Here's a sentence that can be interpreted as either a complaint or a praise, depending on the context: "The service provided was not what I expected, but it exceeded my expectations in terms of efficiency."

Positive

The .Predict function is connected to the onSelect property of the Test it out button. It uses an AI model to create text based on your instructions.

[Learn more](#)

AI Builder Labs

Start using AI Builder with sample data

Article • 05/31/2022 • 4 contributors

[Feedback](#)

Don't have any data of your own to create a model? No problem! We've got you covered.

Sample data is available for several AI Builder model types, together with instructions for working with the sample data. Select one of these options to get started:

- [Use sample data to do prediction](#)
- [Use sample data to do category classification](#)
- [Use sample data to do entity extraction](#)
- [Use sample data to do object detection](#)
- [Use sample data to do document processing](#)

Lab Files

- Prediction
- Category Classification
- Entity Extraction
- Object Detection
- Document Processing

Document Processing

Getting Started with Document Processing

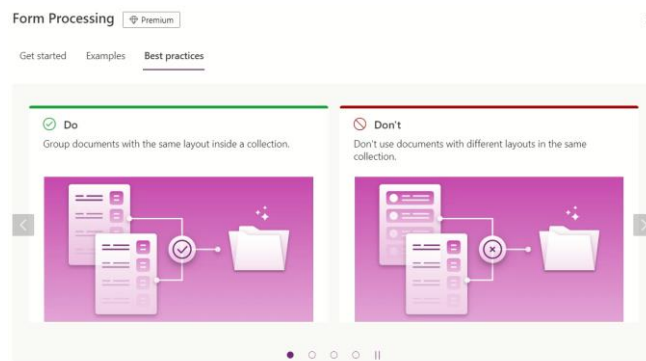
Forms Processing can read data from typed or hand-written forms

You will need at least 5 sample forms with varying data to build

You can collect the same data from multiple form layouts

Data in Tables can be collected

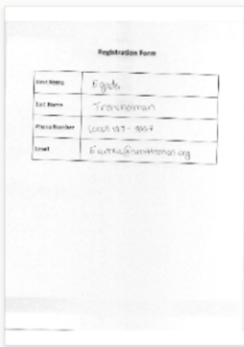
Files should be PDF, PNG, or JPG



Current Limitations

Models > Registration Form - Practice
Form Processing • Published • Kylie Kiser

Training document [See details](#)





[Use model](#) [Quick test](#) [⋮](#)

Selected fields [See more](#)

- First Name
- Last Name
- Phone Number
- E-mail

How your model is used

-  Power Automate [See documentation](#)
-  Power Apps [See documentation](#)

Does not support

- Complex tables
- Fillable PDFs

Files cannot be password protected

Signatures are not supported



Demo Time!

Final Power App

Training the Forms Processing model

Adding to a Power App

Diver's License Demo

Demo Time!

Demo files: <https://github.com/microsoft/Federal-Business-Applications/tree/main/demos/ai-builder-drivers-license>

Use Power Automate to review a file and extract the data

Display in a Power App



Object Detection

What is Object Detection?



Determine if and how many of a particular object is in an image



Example: Streamline inventory management for retail



Need 15 images per object being tagged



Try to have varied images for the best accuracy



Home

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Power Platform

Detect custom objects in images



Easily build, train and publish an object detection custom model to identify and locate custom object in images. Custom models are trained with your own data, so they're tailored to your business needs. Check out our [learn module](#) to get started with building a custom object detection model to detect and count objects in images.

[Custom model](#)[Premium](#)

In the example below, the model was trained to detect and count tea boxes in images.



Object name	Object count
Green Tea Rose	1
Green Tea Mint	1
Green Tea Cinnamon	1

[View documentation](#)[Get started](#)

Ask a virtual agent

categories

an 90

- ✓ Select domain
- Choose objects
- Add images
- Tag images
- Model summary

Select your model's domain

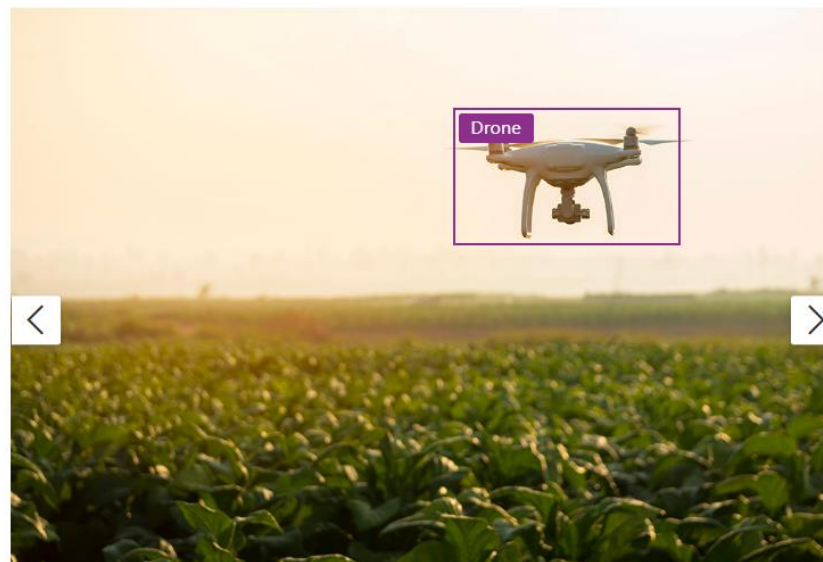
When models focus on specific types of objects, they can be more accurate. If you don't see the right option, select **Common objects**.

[Learn more](#)

☒ Common objects

☐ Objects on retail shelves

☐ Brand logos



Next

💡 Quick tips

Get help or send feedback

Get the answers you need, or tell us about your experiences.

🗨️ [Get help](#)



- ✓ Select domain
Common objects
- Choose objects
- Add images
- Tag images
- Model summary

Select from database

Choose objects for your model to detect

You can add them manually or select from your database. [Learn more](#)

Object names

Add new object

[Back](#)[Next](#)

1 object name selected

Quick tips

Select from database instead

Save time and use objects in Dataverse, rather than creating them manually.

[Switch to database](#)

Get help or send feedback

Get the answers you need, or tell us about your experiences.

[Get help](#)

[+ Add images](#)[✎](#) Object Detection 3/22/2023, 10:58:40 AM | [📄](#) Save and close

- ✓ Select domain
Common objects
- ✓ Choose objects
1 object name selected
- **Add images**
- Tag images
- Model summary

Add example images for your objects



Find images containing your objects

You need to add at least 15 images for each object you want to detect.

[Add images](#)[Back](#)[Next](#)

💡 Quick tips

Add lots of images

Start with 15+ images per object, but 50+ is better. It's OK to tag 2+ objects in the same image.

[Learn more](#)

Image requirements

Use .jpg, .png, .bmp image - up to 6 MB each.

Get help or send feedback

Get the answers you need, or tell us about your experiences.

[🗨️ Get help](#)

+ Add images






✎ Object Detection 3/22/2023, 10:58:40 AM | 💾 Save and close

- ✓ Select domain
Common objects
- ✓ Choose objects
1 object name selected
- Add images
- Tag images
- Model summary

Add example images for your objects

Upload images

These images will be used to train your model.

📄	Name	Size	Status
	0E86169D-EA18-4B3E-A136-5E62544C8720.jpeg	2.3 MB	🔄 Uploading
	2B114E6C-22B3-479F-BC06-50B5DF159FD5.jpeg	748.2 KB	Uploaded
	3ABF80D6-E805-4B5F-AE03-E6C8F7D647AF.jpeg	2.5 MB	🔄 Uploading
	3CBCF383-B596-4844-BC8F-1450742DA70D.jpeg	2.2 MB	
	9D7B9F7F-E52B-459D-AEBC-2D1E48691CF4.jpeg	2.4 MB	

1 of 15 uploaded

Cancel

Back

Next

💡 Quick tips

Add lots of images

Start with 15+ images per object, but 50+ is better. It's OK to tag 2+ objects in the same image.

[Learn more](#)

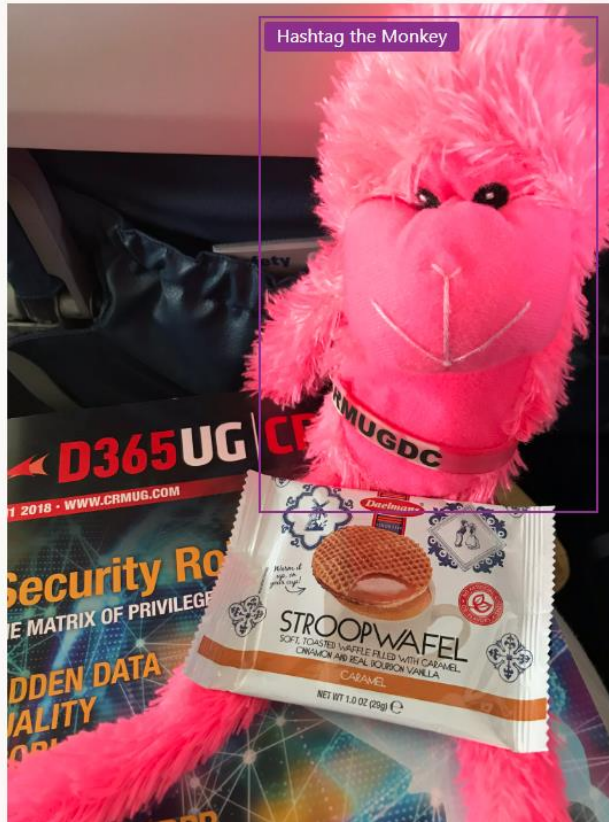
Image requirements

Use .jpg, .png, .bmp image - up to 6 MB each.

Get help or send feedback

Get the answers you need, or tell us about your experiences.

[🗣️ Get help](#)



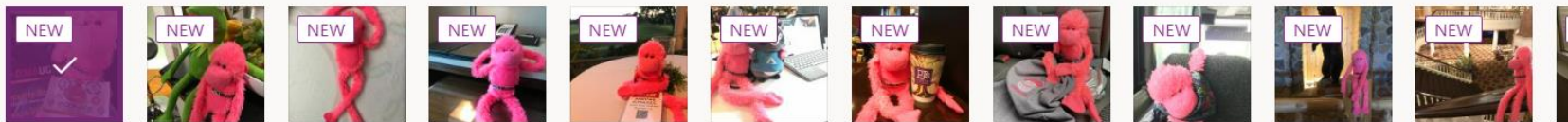
Tagging progress

Image 1 of 15

You must tag at least 15 images for each object. Tagging more than 50 images for each object could yield better results. You can have multiple tags per image.

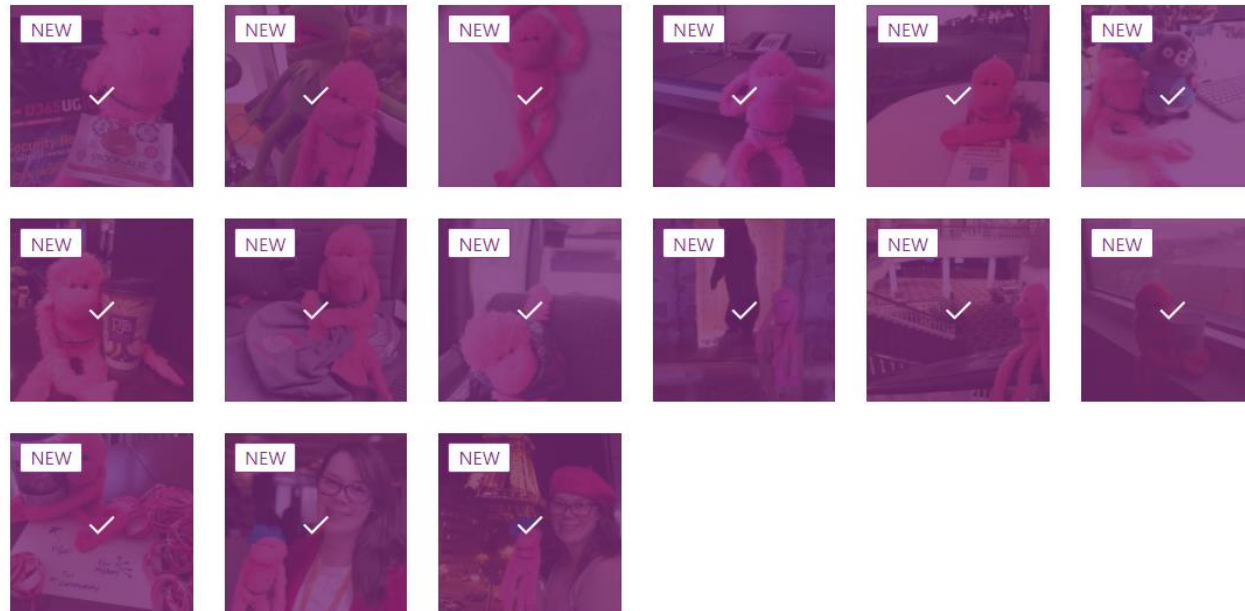
Tags applied

1 Hashtag the Monkey



- ✓ Select domain
Common objects
- ✓ Choose objects
1 object name selected
- ✓ Add images
15 images added
- ✓ **Tag images**
15 images tagged
- Model summary

Tag the objects in your images



All

💡 Quick tips

Tagging requirements

You must tag at least 15 images for each object. Tagging more than 50 images for each object could yield better results. You can have multiple tags per image.

15 [Hashtag the Monkey](#)**Want to add more images?**

Adding more images may increase model performance.

[+ Add images](#)**Get help or send feedback**

Get the answers you need, or tell us about your experiences.

[Get help](#)

Back

Next



Object Detection 3/22/2023, 10:58:40 AM | Save and close

- ✓ Select domain
Common objects
- ✓ Choose objects
1 object name selected
- ✓ Add images
15 images added
- ✓ Tag images
15 images tagged
- Model summary

Model summary

Review your model's details below. If everything looks good, select Train. [Learn more about training](#)

Overview

Owner	Model type	Object type
Kylie Kiser	Object Detection	Common objects

Image sources

Data source	Number of images
My device	15 images

Information to extract

Object	Tags
Hashtag the Monkey	15

[Back](#)[Train](#)

Quick tips

What is training?

Training prepares your model to be used, based on the information you provided.

What's next?

Once trained, you will be able to evaluate your model performance results and publish your model for use in Power Apps. At any time, you can add and tag more images.

Get help or send feedback

Get the answers you need, or tell us about your experiences.

[Get help](#)

- ✓ Select domain
Common objects
- ✓ Choose objects
1 object name selected
- ✓ Add images
15 images added
- ✓ Tag images
15 images tagged
- Model summary

Model summary

Review your model's details below. If everything looks good, select Train. [Learn more about training](#)

Overview

Owner
Kylie Kiser

Image sources



My device

Data source

Information to extract

Object

Hashtag the Monkey



Your model is training

This may take a few minutes depending on the size of your training data.
You can close this window and come back later.

Finalizing

Quick tips

What is training?

Training prepares your model to be used, based on the information you provided.

What's next?

Once trained, you will be able to evaluate your model performance results and publish your model for use in Power Apps. At any time, you can add and tag more images.

Get help or send feedback

Get the answers you need, or tell us about your experiences.

[Get help](#)

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Training

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Ask a virtual agent

Edit model Share Settings Delete

Your model isn't published yet. Publish to use it in apps and flows. [Learn more](#)

Models > **Object Detection 3/22/2023, 10:58:40 AM**

Object Detection • Not published • Kylie Kiser

Performance

This score looks unrealistically high. [Learn more](#)

Publish

Quick test

Details [See more](#)

Training date

11:08:37 AM

Object type

Common objects

Number of objects

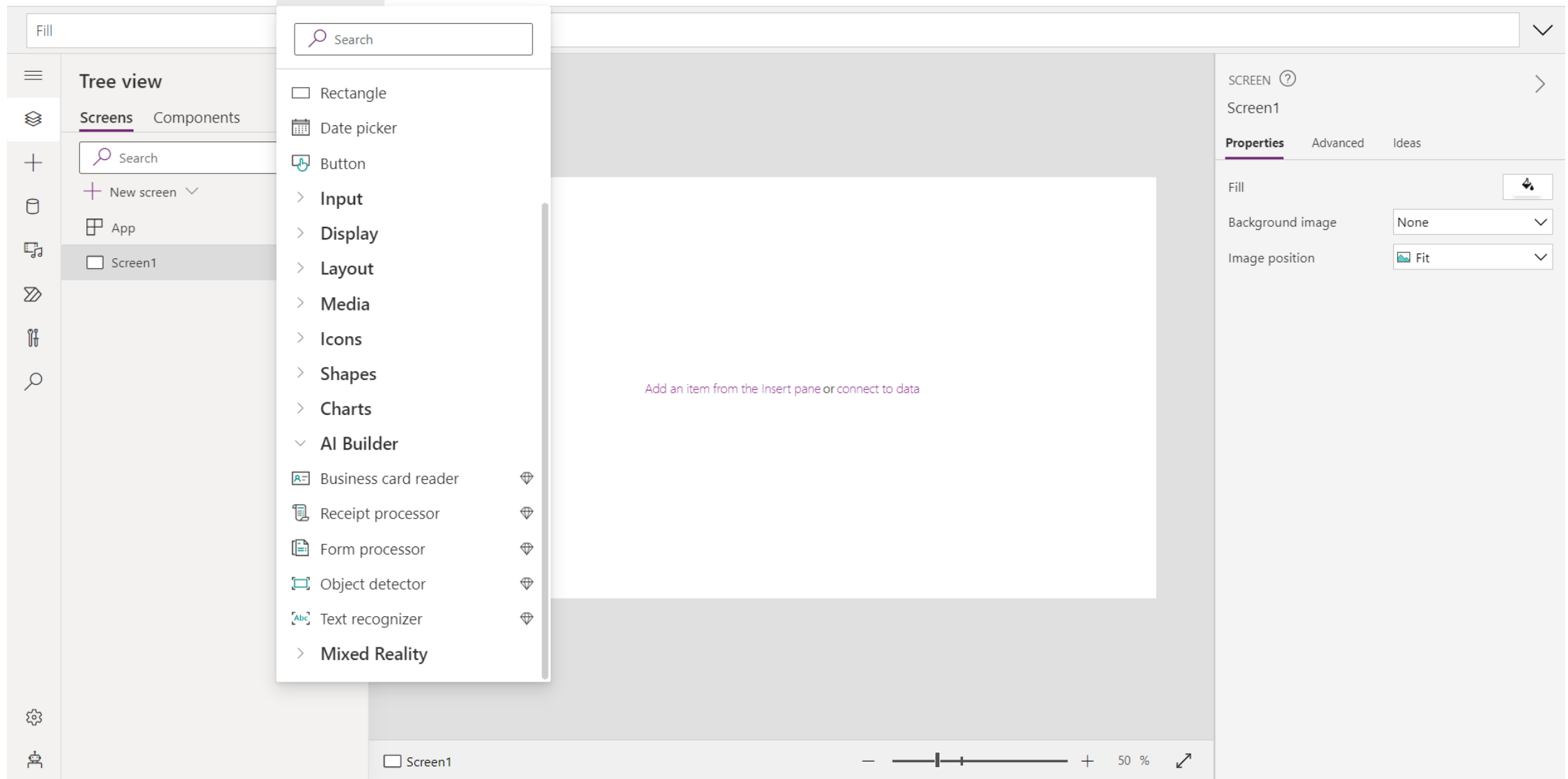
1

How your model is used

Power Automate
Model isn't published

Power Apps
Model isn't published

34



Power Apps | Screenshots - Hashtag Detector

Environment
AI Builder - Sandbox

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Insert

Add data

New screen

Theme

Settings

Text

=

fx

"Detect"

Tree view

Screens

Components

Search

New screen

App

Screen1

ObjectDetector1

ObjectDetector1

This object detection isn't connected to any AI model yet.

AI models

Search

New model

Refresh

Object Detection 3/21/2023, 5:34:45 PM - ...

03357243-fca7-4430-9117-92f8384fe0db

Object Detection 3/22/2023, 10:58:40 AM

e93c16b9-b077-461e-b853-cb1dfedacabe

OBJECT DETECTOR

ObjectDetector1

Properties

Advanced

Ideas

Text

Detect

Display mode

Edit

Show image

On

Show controls

On

AI model

Select model

Color

A

Border

1

Disabled color

A

Visible

On

Position

40

40

X

Y

Size

350

250

Width

Height

Show labels

On

Labels font size

12

Show bounding boxes

On

← Back | ↶ | ▾ | 📄 | ▾ | + Insert ▾ | 📊 Add data ▾ | 🖥️ New screen ▾ | 🎨 Theme ▾ | ⚙️ Settings ...

🔗 📄 💬 ▶️ 📁 | ▾ | 📁

Items ▾ = fx ▾ ObjectDetector1.Results ▾

Tree view

Screens Components

🔍 Search

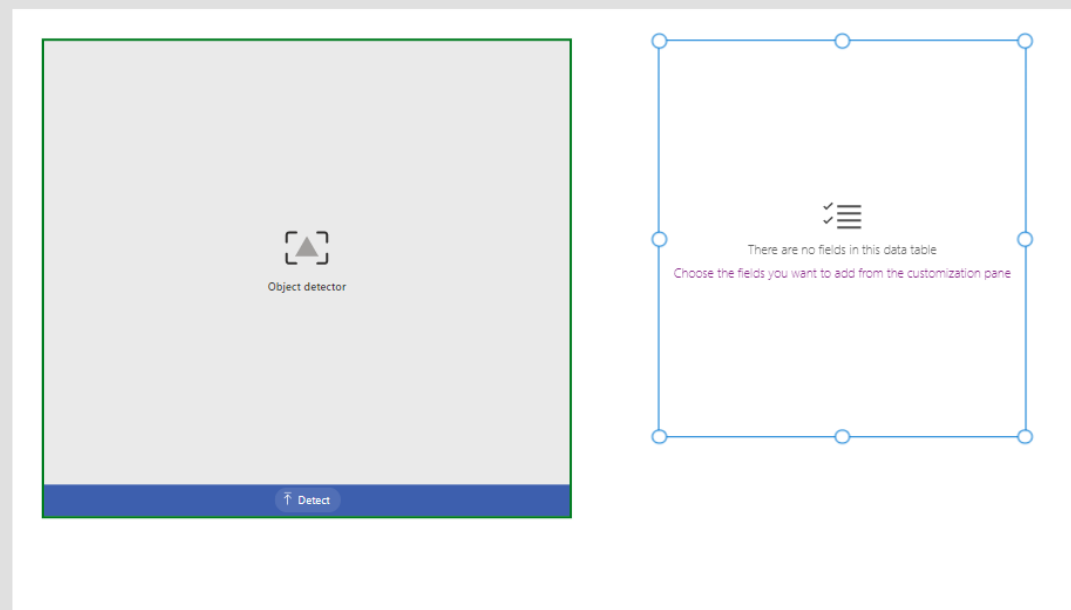
+ New screen ▾

📱 App

▾ 📄 Screen1

📊 DataTable1 ...

🔗 ObjectDetector1



DATA TABLE (PREVIEW) ?

DataTable1

Properties **Advanced** Ideas

Search for a property ... 🔍

DATA

Items

ObjectDetector1.Results

NoDataText

"We didn't find any data to show at this time"

ContentLanguage

""

DESIGN

SelectedFill

RGBA(56, 96, 178, .2)

SelectedColor

RGBA(0, 0, 0, 1)

HoverFill

RGBA(186, 202, 226, .2)

📄 Screen1

📊 DataTable1

— ———— + 50 % ↗

×

Search

+ New screen ▾

App

...

▼  DataTable1

TagName_Column1

 TagId_Column1

Confidence_Column1

 ObjectDetector1

Confidence	TagId	TagName
0.7970848	7356f4de-c3fd-4...	Hashtag the Mo..

Azure AI Services

Overview



AI Builder is built on top of Azure AI Services



Azure AI Services allows you to do more advanced AI with a broad range of APIs



5 categories: Vision, Speech, Language, Decision, Search



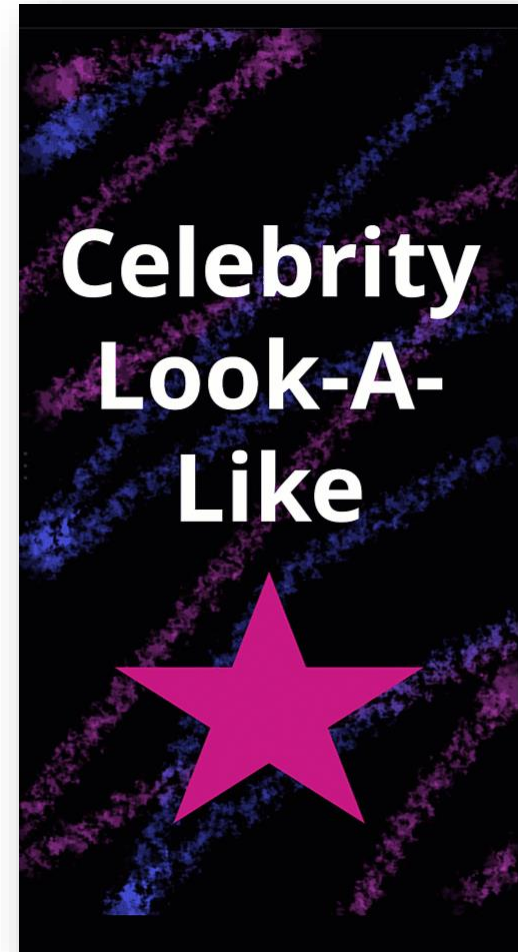
This can still be low code!

Example: Face API

Finds which celebrity you look the most like

Uses OneDrive, Power Automate, Azure AI Services (Face API), and Power Apps

Low Code!



Azure for Gov Computer Vision

Tap the camera control to save an image



Back camera



Captured Image



Analyze Photo

a desk with a laptop computer sitting on
top of a wooden table

Azure Computer Vision Demo

Microsoft Federal Demo on GitHub

Power App that uses Flow and Azure Computer Vision to tell you what an image is of

Still all Low-Code!

[Demo Files](#)

Which one?

AI BUILDER

Makers

Pre-built, customizable models

AI Builder Capacity Add-on (up to 1 million service credits)

AZURE AI SERVICES

Developers

Fully extendable

Cheaper pricing model by transaction



Final Thoughts

Responsible AI

Fairness

Reliability and
Safety

Privacy and
Security

Inclusiveness

Transparency

Accountability

QUESTIONS AND ANSWERS



Connect with Me!

Kylie Kiser



RSM Booth #201



[LinkedIn.com/KylieKiser](https://www.linkedin.com/KylieKiser)



KylieKiser.com

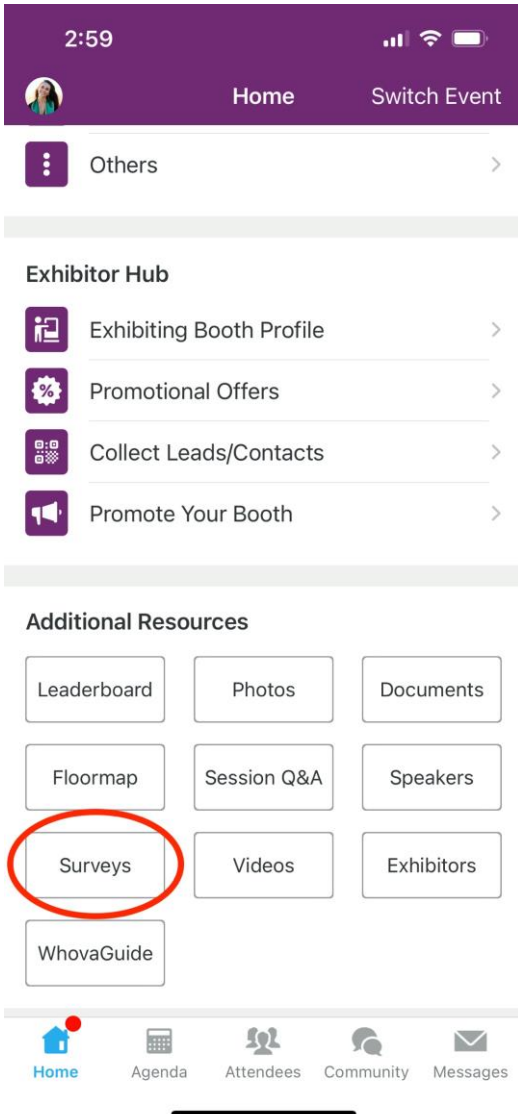


[@KylieKiser](https://twitter.com/KylieKiser)



Youtube.com/KylieKiserPowerPlatform





Session Feedback Surveys

We really want to hear from YOU!

In the pursuit of making next year's Microsoft Power Platform Conference even better, we want to hear your feedback about this session.

Here's How -

- *Simply go to the Whova App on your smartphone*
- *Scroll down on the Microsoft Power Platform Conference Homepage to 'Additional Resources' to click "Surveys".*
- *Click Session Feedback.*
- *Scroll down to find this session title.*
- *Complete the session feedback survey.*
- *Finally, click 'Submit'*

It's just that easy!



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Workshops: April 28, 29 & May 3

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*President – Microsoft
Collaborative Apps and
Platforms, Microsoft*



KARUANA GATIMU

*Principal Manager, Customer
Advocacy Group Microsoft
Teams Engineering, Microsoft*



ADAM HARMETZ

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