

# Azure AI Vision



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# Image Classification - Inference

# Azure AI Vision

## Image Classification Inference

Labs for

- Image analysis
- OCR
- Video indexer

01-analyze-images
Python
image-analysis
images
person.jpg
street.jpg
.env
background.png
image-analysis.py
objects.jpg
people.jpg
readme.txt
02-image-classification
test-images
training-images
replace.ps1
03-object-detection
04-face
05-ocr
C-Sharp
Python
read-text
images
Lincoln.jpg
Note.jpg
.env
read-text.py
text.jpg
readme.txt
06-video-indexer
analyze-video.html
get-videos.ps1
responsible_ai.mp4



# Azure AI Vision

## Video Indexer

Home > Microsoft.VideoIndexer1758464137344 | Overview >

 **videoindexer20250921** ⋆ ⓘ Show me metrics for this Azure AI Video Indexer. Are there any alerts fired for this Azure AI Video Indexer? Summarize the properties of this resource.

Search Delete Move

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

> Settings

> Management

> Monitoring

> Automation

> Help

Unlock generative AI: Connect your Azure Video Indexer resource to Azure OpenAI for more capabilities. [Learn about the benefits of connecting to Azure OpenAI](#)

^ Essentials

Resource group ( <a href="#">move</a> )	:	<a href="#">UdemyCourse</a>
Location ( <a href="#">move</a> )	:	East US
Subscription ( <a href="#">move</a> )	:	<a href="#">Azure subscription 1</a>
Subscription ID	:	9b8688c3-4700-4975-8bcf-8ad3a2248379
Status	:	Active
Tags ( <a href="#">edit</a> )	:	<a href="#">Add tags</a>

Explore

 [Video Indexer portal](#)

Use the Video Indexer web app to extract insights from video and audio files using a rich set of machine learning algorithms.

[Explore the portal](#)

 [Video Indexer API](#)

Extract insights, Integrate with any application or infrastructure, or embed widgets directly into your own website.

[Explore ARM REST API](#) [Explore legacy API](#)

 [Responsible AI](#)

To use people models on this Azure subscription, it needs to be approved to use face recognition by passing the Azure Face Recognition Limited Access Review.

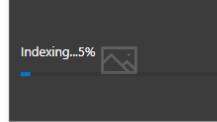
[View the Limited Access Review form](#)

videoindexer.ai/media/library

**Azure AI Video Indexer**

Library Projects Samples

Search Filters

  
Indexing...5%

Promo\_Video Retail  
Uploaded by Bert Gollnick

<https://www.videoindexer.ai/media/library>



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# Azure AI Vision

Video Indexer

## Azure AI Video Indexer

Easily extract meaningful insights from audio and video files using media AI.

[Try Azure for free](#)

[Create a pay-as-you-go account](#)

<https://azure.microsoft.com/en-us/products/ai-video-indexer#>



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# Azure AI Vision

## Video Indexer

Azure AI Video Indexer     + Create unlimited account     bertgollnick-8390f9 Trial     ⓘ     ⚙     ?



»     📺     🌐     🔍     ☰     ?

Search

8 detected objects

flasche   stuhl   buch   weinglas   schüssel   topfpflanze   tasse   esstisch



004

Play previous     Play next

2 topics

Essen und trinken / Kochen / Rezepte

Einkaufen / Essen

Play previous     Play next

Promo\_Video\_Retail

PRIVATE     Created 2 minutes ago by Bert Gollnick

Add tags     Embed     Copy video ID     Download     Open in editor

3 keywords

zutaten   rezepte   genai

Play previous

Play next

# Custom Model Training

# Azure AI Vision

## Create Computer Vision

Microsoft Azure

Home > AI Foundry | Computer vision >

### Create Computer Vision

Basics Network Identity Tags Review + create

Boost content discoverability, accelerate text extraction, and create products that more people can use by embedding vision capabilities in your apps. Use visual data processing to label content (from objects to concepts), extract printed and handwritten text, recognize familiar subjects like brands and landmarks, and moderate content. No machine learning expertise is required.

[Learn more](#)

**Project Details**

Subscription \*  Resource group \*  [Create new](#)

**Instance Details**

Region  Name \*  Pricing tier \*

[View full pricing details](#)

**Responsible AI Notice**

Microsoft provides technical documentation regarding the appropriate operation applicable to this Azure AI service that is made available by Microsoft. Customer acknowledges and agrees that they have reviewed this documentation and will use this service in accordance with it. This Azure AI services is intended to process Customer Data that includes Biometric Data (as may be further described in product documentation) that Customer may incorporate into its own systems used for personal identification or other purposes. Customer acknowledges and agrees that it is responsible for complying with the Biometric Data obligations contained in the Online Services DPA.

**Online Services DPA**

Responsible Use of AI documentation for Spatial Analysis

By checking this box I certify that I have  reviewed and acknowledge the all the terms above.\*

[Previous](#) [Next](#) [Review + create](#)



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# Azure AI Vision

## Create storage account

Home > Storage center | Storage accounts (Blobs) >

### Create a storage account ...

[Basics](#)   [Advanced](#)   [Networking](#)   [Data protection](#)   [Encryption](#)   [Tags](#)   [Review + create](#)

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more about Azure storage accounts](#)

#### Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription \*

Resource group \*  [Create new](#)

#### Instance details

Storage account name \*  (1)

Region \*  (1)  
[Deploy to an Azure Extended Zone](#)

Preferred storage type  (1)

This helps us provide relevant guidance. It doesn't restrict your storage to this resource type. [Learn more](#)

Performance \* (1)

Standard: Recommended for most scenarios (general-purpose v2 account)

Premium: Recommended for scenarios that require low latency.

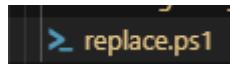
Redundancy \*



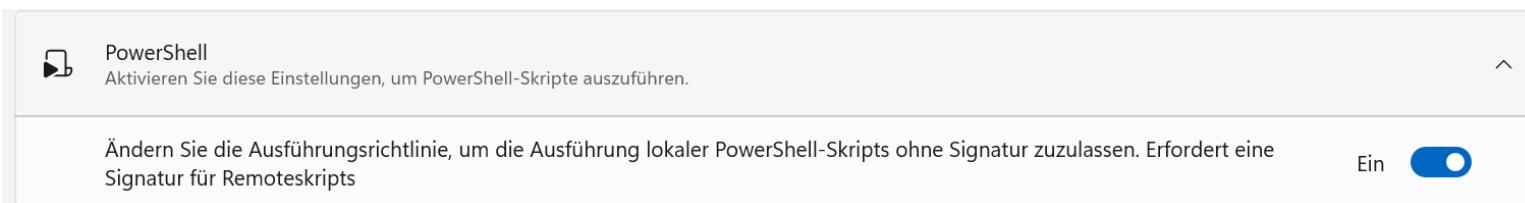
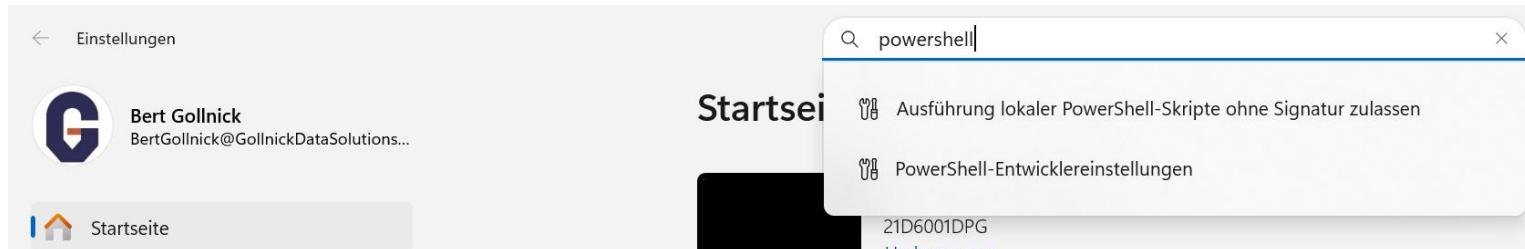
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# Azure AI Vision

Powershell – adapt training\_labels.json



```
$storageAcct = 'cvcustommodel20250921'  
(Get-Content training-images/training_labels.json) -replace '<storageAccount>',  
$storageAcct | Out-File training-images/training_labels.json Ivor Berry, 2
```



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# Azure AI Vision

## Blob Container erstellen

Home > cvcustommodel20250921

cvcustommodel20250921 | Configuration

Storage account

Search

Save Discard Refresh Give feedback

The cost of your storage account depends on the usage and the options you choose below. [Learn more about storage pricing](#)

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser

Storage Mover

Partners solutions

Account kind  
StorageV2 (general purpose v2)

Performance  
 Standard  Premium

This setting cannot be changed after the storage account is created.

Secure transfer required  
 Disabled  Enabled

Allow Blob anonymous access  
 Disabled  Enabled

## New container

Name \*

fruit

Anonymous access level

Container (anonymous read access for containers and blobs)

All container and blob data can be read by anonymous request. Clients can enumerate blobs within the container by anonymous request, but cannot enumerate containers within the storage account.

Advanced

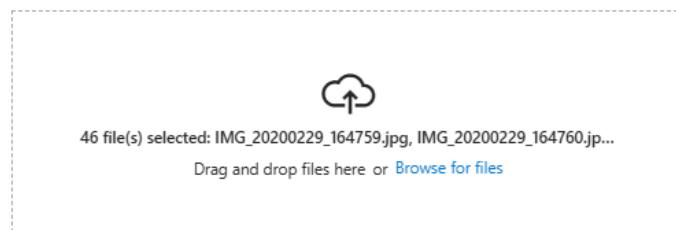


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# Azure AI Vision

## Daten uploaden

### Upload blob



Overwrite if files already exist

Advanced

**Upload**

Give feedback

Home > cvcustommodel20250921

### cvcustommodel20250921 | Storage browser

Storage account

Search cvcustommodel20250921

Add Directory Upload Change access level Refresh Delete

Blob containers > fruit

Authentication method: Access key (Switch to Microsoft Entra user account)

Add filter

Search blobs by prefix (case-sensitive)

Showing all 46 items

Name

- IMG\_20200229\_164759.jpg
- IMG\_20200229\_164760.jpg
- IMG\_20200229\_164804.jpg
- IMG\_20200229\_164811.jpg
- IMG\_20200229\_164819.jpg
- IMG\_20200229\_164823.jpg
- IMG\_20200229\_164830.jpg

Overview Activity log Tags Diagnose and solve problems Access Control (IAM) Data migration Events Storage browser Storage Mover Partner solutions Resource visualizer Data storage Security + networking Data management

Favorites Recently viewed Blob containers Slogs fruit View all File shares Queues Tables

# Azure AI Vision

Daten uploaden

Azure AI | Vision Studio

Vision Studio > My resources

### Select a resource to work with

[Learn more about creating an Azure resource](#)

Current resource: azure-ai-start (East US, S0)  
Current subscription: Azure subscription 1

All resources

Search

Resource name ↑

azure-ai-start	☆
computer-vision20250921	☆

[Azure Vision Studio](#)



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# Azure AI Vision

## Custom Vision

Home > AI Foundry | Custom vision >

### Create Custom Vision ...

Basics Network Tags Review + create

Customize and embed state-of-the-art computer vision for specific domains. Build frictionless customer experiences, optimize manufacturing processes, accelerate digital marketing campaigns -- and more. No machine learning expertise is required.

[Learn more](#)

Create options \*

- Both
- Prediction
- Training

#### Project Details

Subscription \* ⓘ

Azure subscription 1

Resource group \* ⓘ

UdemyCourse

[Create new](#)

#### Instance Details

A training resource and a prediction resource will be created in same region.

Region ⓘ

East US

Name \* ⓘ

mycustomvision20250921

#### Training Resource

Select pricing for training Resource.

Training pricing tier \* ⓘ

Standard S0 (10 Transactions per second)

[View full pricing details](#)

#### Prediction Resource

Select pricing for prediction Resource.

Prediction pricing tier \* ⓘ

Standard S0 (10K Transactions per month)

[View full pricing details](#)

[Previous](#)

[Next](#)

[Review + create](#)

### Create new project

X

Name\*

fruitclassification

Description

Fruit Classification

Resource\*

mycustomvision20250921 [S0]

[create new](#)

[Manage Resource Permissions](#)

Project Types ⓘ

- Classification
- Object Detection

Classification Types ⓘ

- Multilabel (Multiple tags per image)
- Multiclass (Single tag per image)

Domains:

- General [A2]
- General [A1]
- General
- Food
- Landmarks
- Retail
- General (compact) [S1]
- General (compact)
- Food (compact)
- Landmarks (compact)
- Retail (compact)

Pick the domain closest to your scenario. Compact domains are lightweight models that can be exported to iOS/Android and other platforms. [Learn More](#)

[Cancel](#)

[Create project](#)

<https://www.customvision.ai/>



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# Azure AI Vision

## Custom Vision - Tagging

fruitclassification

Add images Delete Tag images Select all

Training Images Perform

Filter

Iteration

Workspace

Tags

Tagged Untagged

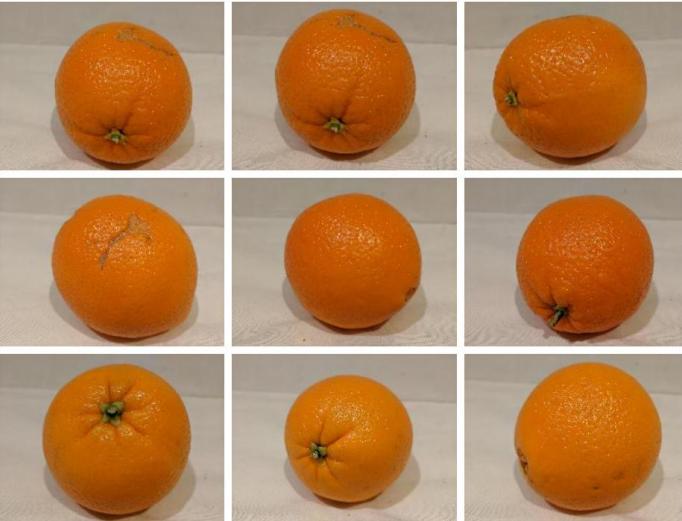
Showing: all tagged images

Search For Tags:

apple 15 ...

banana 15 ...

orange 15 ...



### Choose Training Type

#### Training Types ⓘ

- Quick Training  
 Advanced Training

Est. Minimum Budget: 1 hour

Train

<https://www.customvision.ai/>



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# Azure AI Vision

## Custom Vision - Training

fruitclassification Training

Iterations Probability Threshold: 50% ⓘ

Iteration 1 Publish Prediction URL Delete Export

Finished training on 9/21/2025, 9:26:24 AM using General domain  
Iteration id: c3dab9f-17ae-443b-993d-e762fbea3c2a  
Classification type: Multiclass (Single tag per image)

Precision ⓘ Recall ⓘ AP ⓘ

Tag	Precision	Recall	A.P.	Image count
orange	100.0%	100.0%	100.0%	15 
banana	100.0%	100.0%	100.0%	15 
apple	100.0%	100.0%	100.0%	15 

<https://www.customvision.ai/>



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# Azure AI Vision

## Custom Vision - Testing

Quick Test



X

Image URL

 Enter Image URL →

or

Browse local files

File formats accepted: jpg, png, bmp

File size should not exceed: 4mb

Using model trained in

Iteration

Iteration 1 ▾

Predictions

Tag	Probability
banana	100%
apple	0%
orange	0%

<https://www.customvision.ai/>



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# Azure AI Vision

Custom Vision – Get suggested tags

Image Detail  Suggested tags on



Image Detail  Suggested tags on

My Tags

Suggested Tags  
**banana (100%)**

Confidence Threshold: 60%

Image Detail  Suggested tags on



My Tags

Suggested Tags  
**apple (100%)**

Confidence Threshold: 60%

<https://www.customvision.ai/>



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# Azure AI Vision

## Custom Vision – Train via Python

The screenshot shows the 'Project Settings' page for a project named 'fruitclassification'. The 'General' section includes fields for 'Project Name' (set to 'fruitclassification'), 'Project Id' (set to '4b3a913e-47e2-4aeb-ba29-18a5e0ef72a2'), and 'Description' (set to 'Fruit Classification'). The 'Resources' section displays resource details: 'mycustomvision20250921', 'Subscription: Azure subscription 1', 'Resource Group: UdemyCourse', and 'Resource Kind: Custom Vision Training'. The 'Endpoint' is listed as 'https://mycustomvision20250921.cognitiveservices.azure.com/'. The 'Pricing Tier' is set to 'S0', with a 'Change Pricing Tier' button. Usage statistics show 48 training images uploaded and 3 tags created.

Project Settings

General

Project Name\*

fruitclassification

Project Id

4b3a913e-47e2-4aeb-ba29-18a5e0ef72a2

Description

Fruit Classification

Usage: ⓘ

48 training images uploaded; 99952 remain

3 tags created; 497 remain

1 iterations saved; 19 remain

Domains:

- General [A2]
- General [A1]
- General
- Food
- Landmarks
- Retail



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# Azure AI Vision

## Custom Vision – Prediction

fruitclassification

Iterations

Probability Threshold: 50% i

Iteration 2

Trained : 5 minutes ago with General domain

Iteration 1

Trained : 8 hours ago with General domain

Precision i

100.0%

Performance Per Tag

Tax Precision Recall A.P. Image count

✓ Publish ⊕ Prediction URL trash Delete down Export

[Training Images](#) [Performance](#)

Iteration 2

Finished training on **9/21/2025, 4:55:44 PM** using **General** domain  
Iteration id: **b5a5c4e4-3777-4cdd-8e07-15335159f4e2**  
Classification type: **Multiclass (Single tag per image)**

**Publish Model**

We only support publishing to a prediction resource in the same region as the training resource the project resides in.

Please check if you have a prediction resource and if the prediction resource is in the same region as the training resource.

Model name

Prediction resource

Publish Cancel



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# Pricing

# Azure AI Vision

## Pricing

Azure AI services      Azure AI Vision, Pay as you go, Standard: Image Analysis – ...      Upfront: \$0.00      Monthly: \$0.00

### AI Services

Get \$200 credit plus free monthly amounts of popular services for 12 months—including the Computer Vision API. [See free amounts](#)

API: Azure AI Vision      Region: East US      Payment Option: Pay as you go      Tier: Standard

#### Image Analysis

##### Background Removal (preview)

Free in preview

Group 1 [①](#)

<input type="text" value="0"/> x1,000 transactions	= \$0.00
--	----------

Group 2 [①](#)

<input type="text" value="0"/> x1,000 transactions	= \$0.00
--	----------

#### Image Analysis Model Customization

##### Custom Object Detection (preview)

<input type="text" value="0"/> Hours	× \$20.00	Per hour	= \$0.00
--------------------------------------	-----------	----------	----------

<https://azure.microsoft.com/en-us/pricing/calculator/>



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