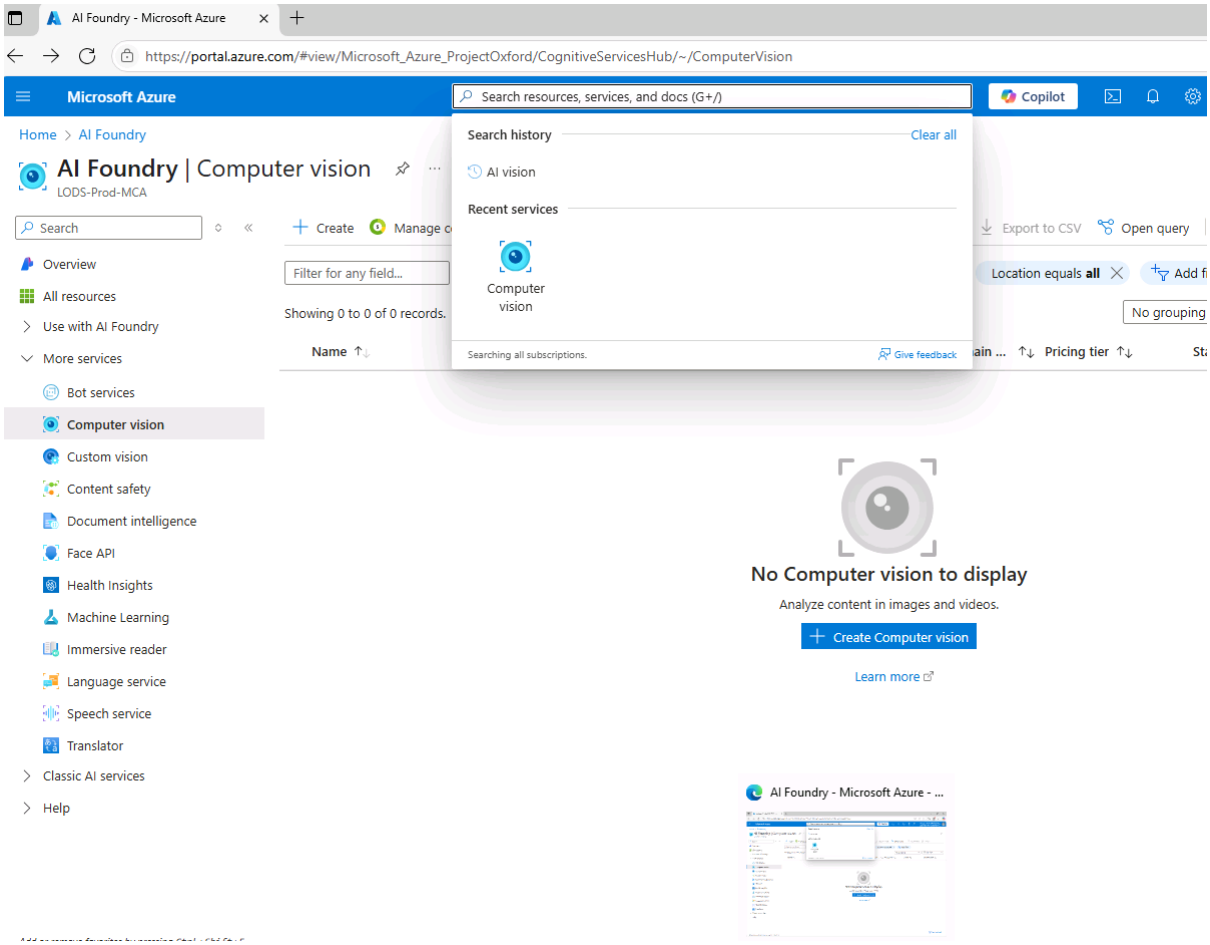
Azure AI Vision Lab Instructions – Low Code Labs

Azure AI Vision is a cloud-based service from Microsoft that leverages advanced algorithms to analyse images and extract valuable information. It encompasses a range of capabilities—from Optical Character Recognition (OCR) and face detection to comprehensive image analysis and video indexing—all designed to solve real-world problems quickly and effectively.

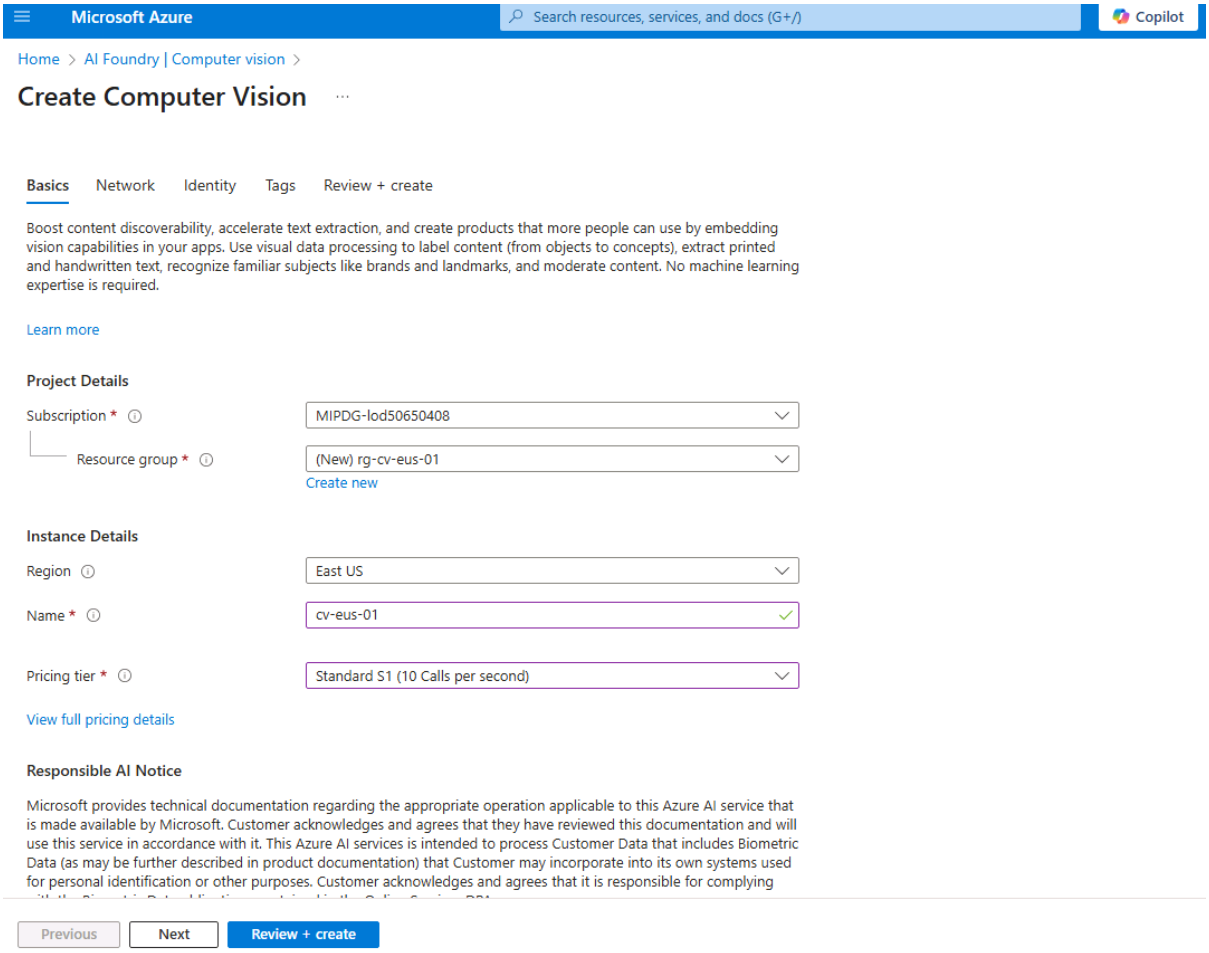
This lab walks through the low code version of the exercises.

Exercise 1: Provision Azure Resources

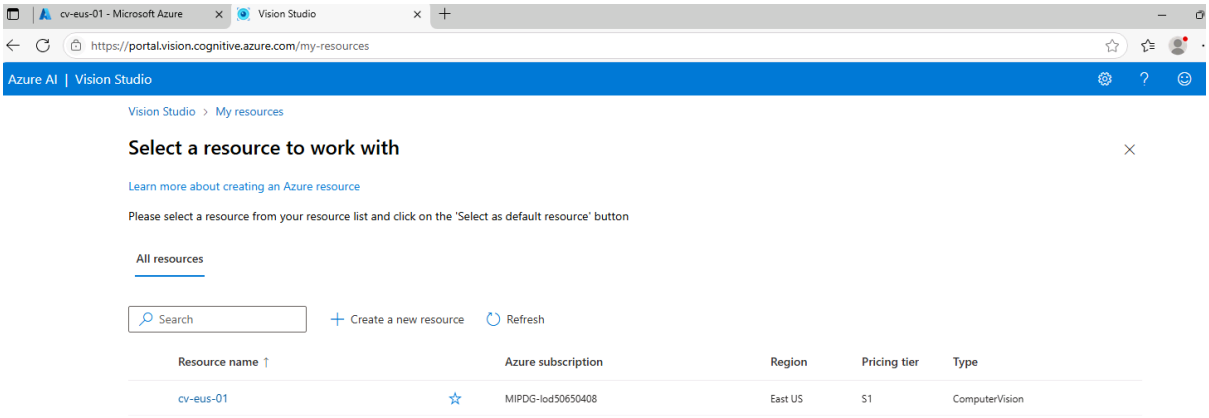
01. Access Azure portal and create a computer vision resource.



02. Make sure to create the resource in a region where the Azure services are available.



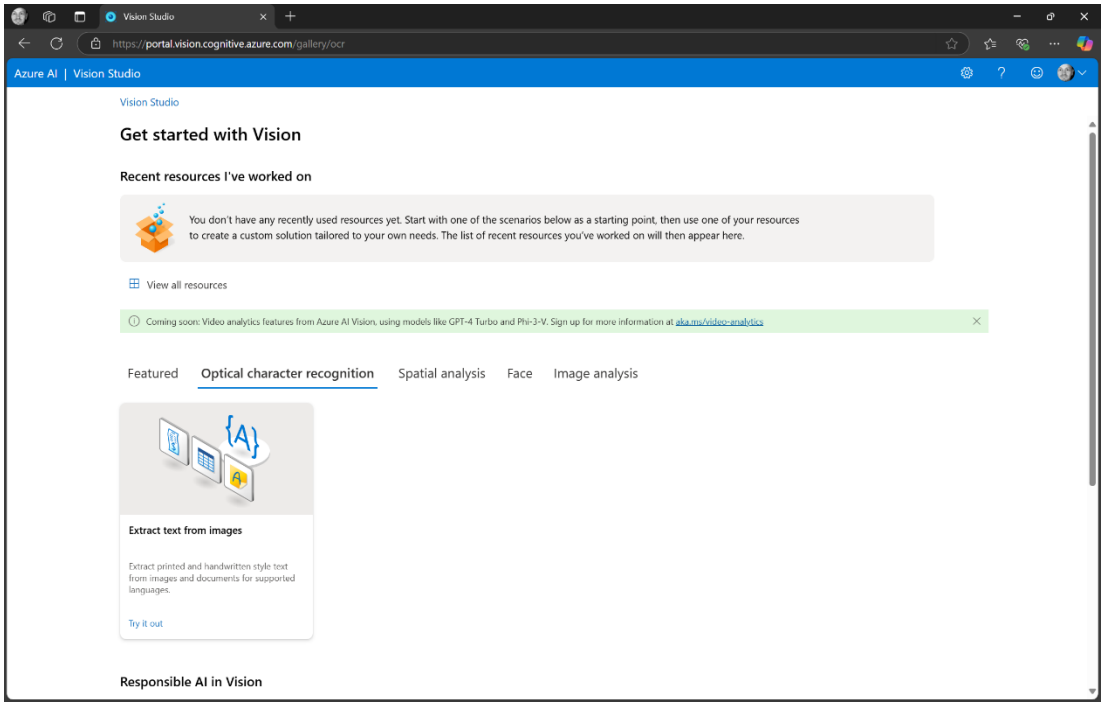
03. Access the Vision Studio from: https://portal.vision.cognitive.azure.com/ and select the resource you created through the portal.



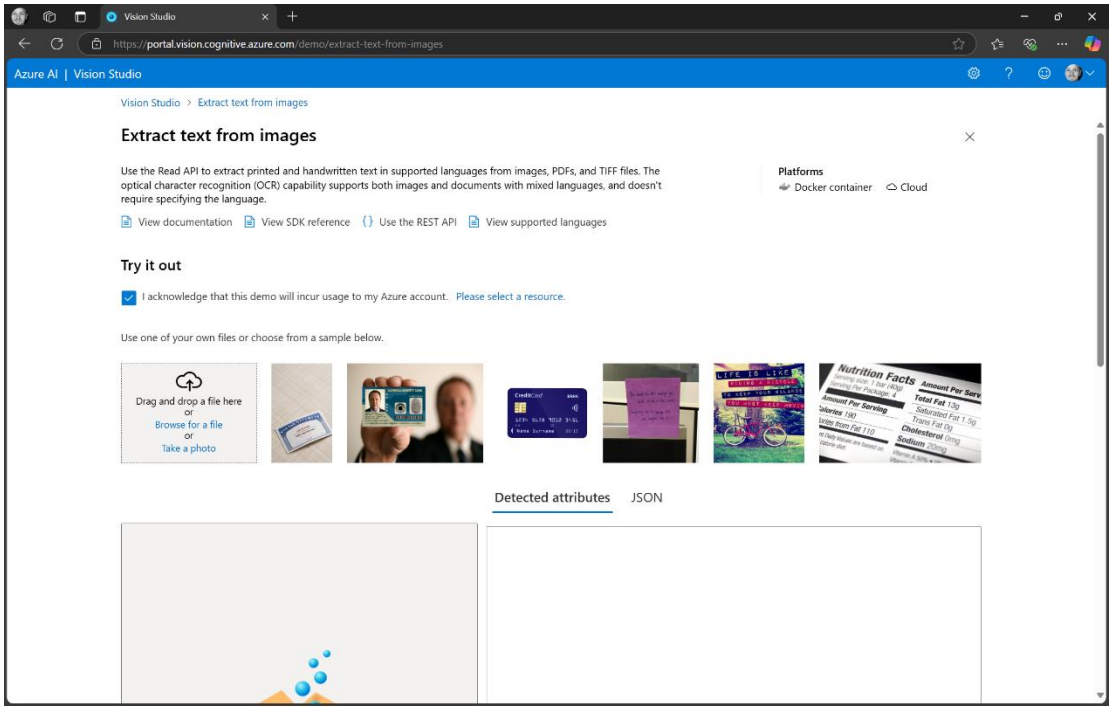
Exercise 2: Provision Azure Resources

This exercise demonstrates how to use Azure AI Vision, Optical Character Recognition (OCR) to extract text from images.

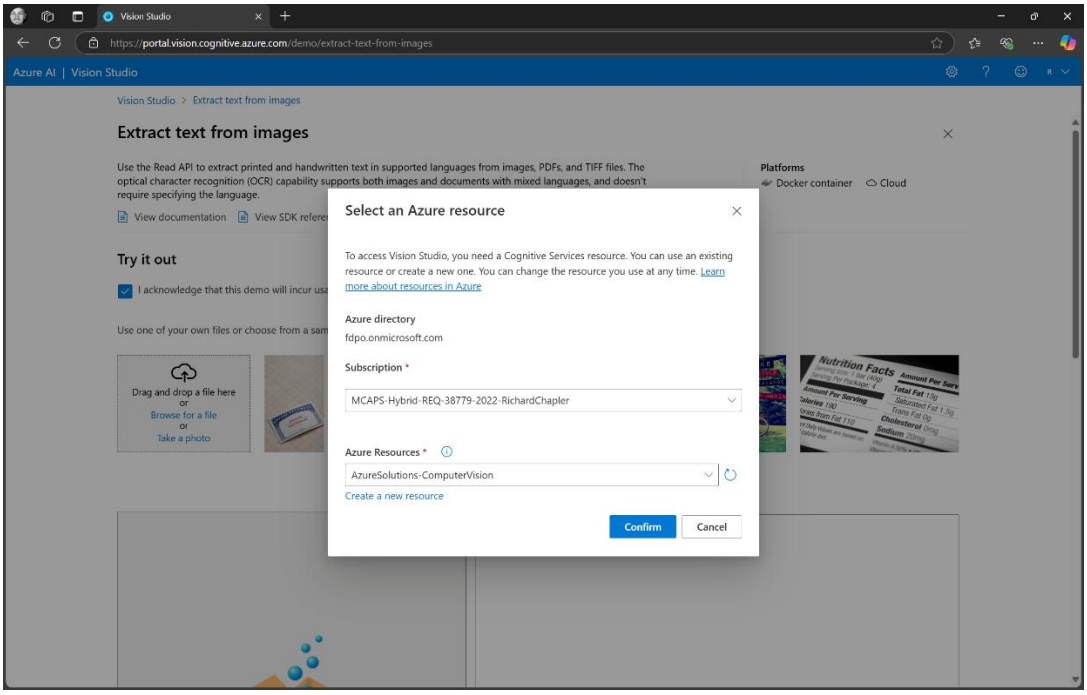
01. Navigate to Azure AI | Vision Studio, log in with your Azure credentials, and then click on the "Optical character recognition" tab.



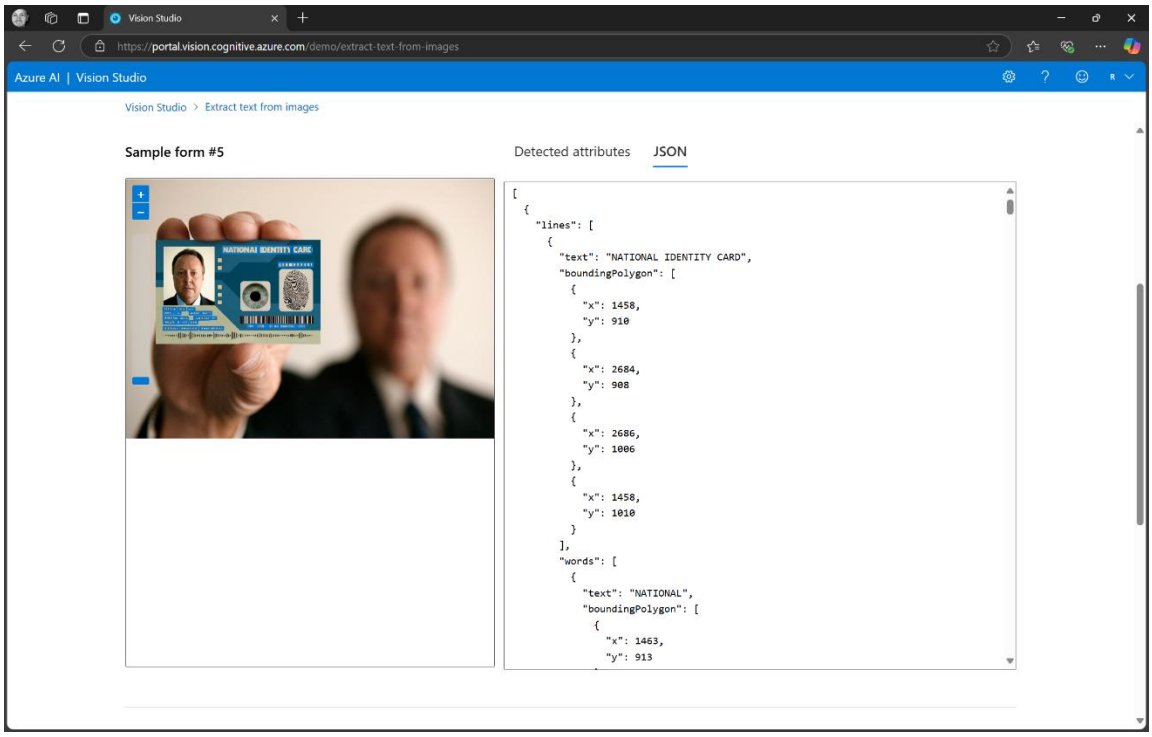
02. Click on Extract text from images



03. Browse for a file and then make sure to click the attached AI vision resource.

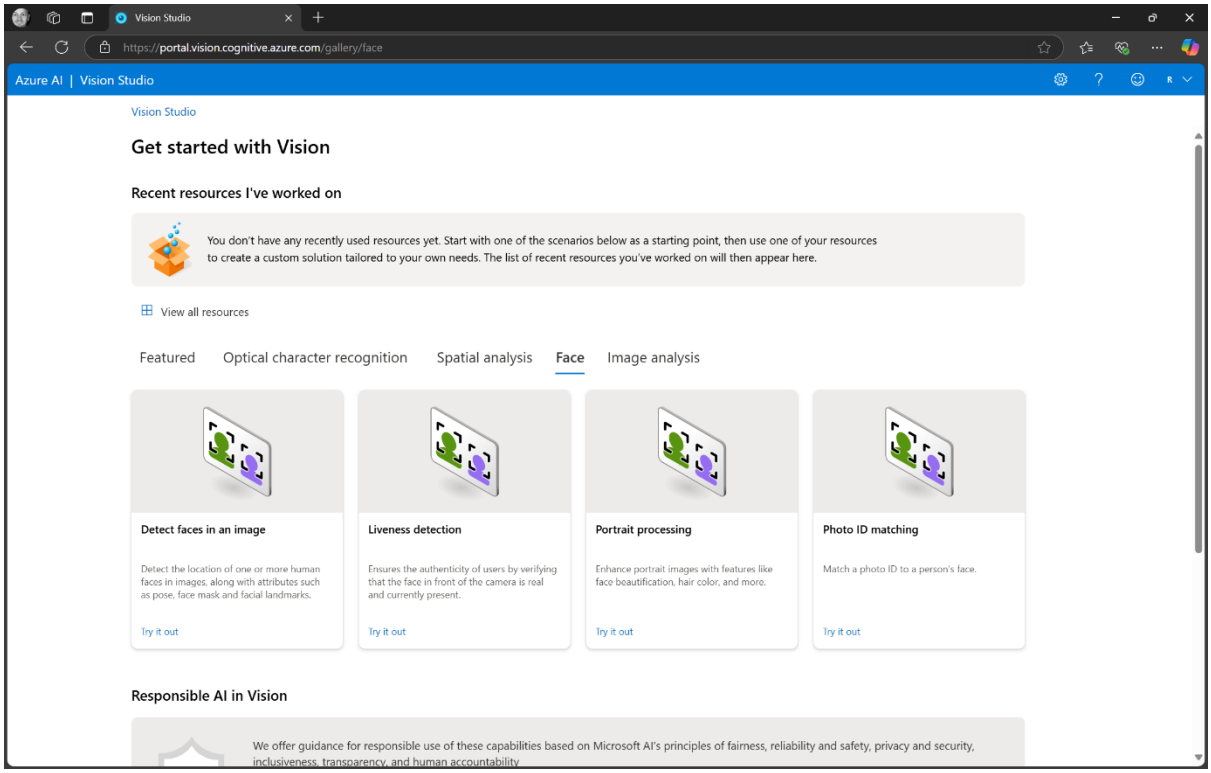


04. Review results on the “Detected attributes/ JSON” tabs.

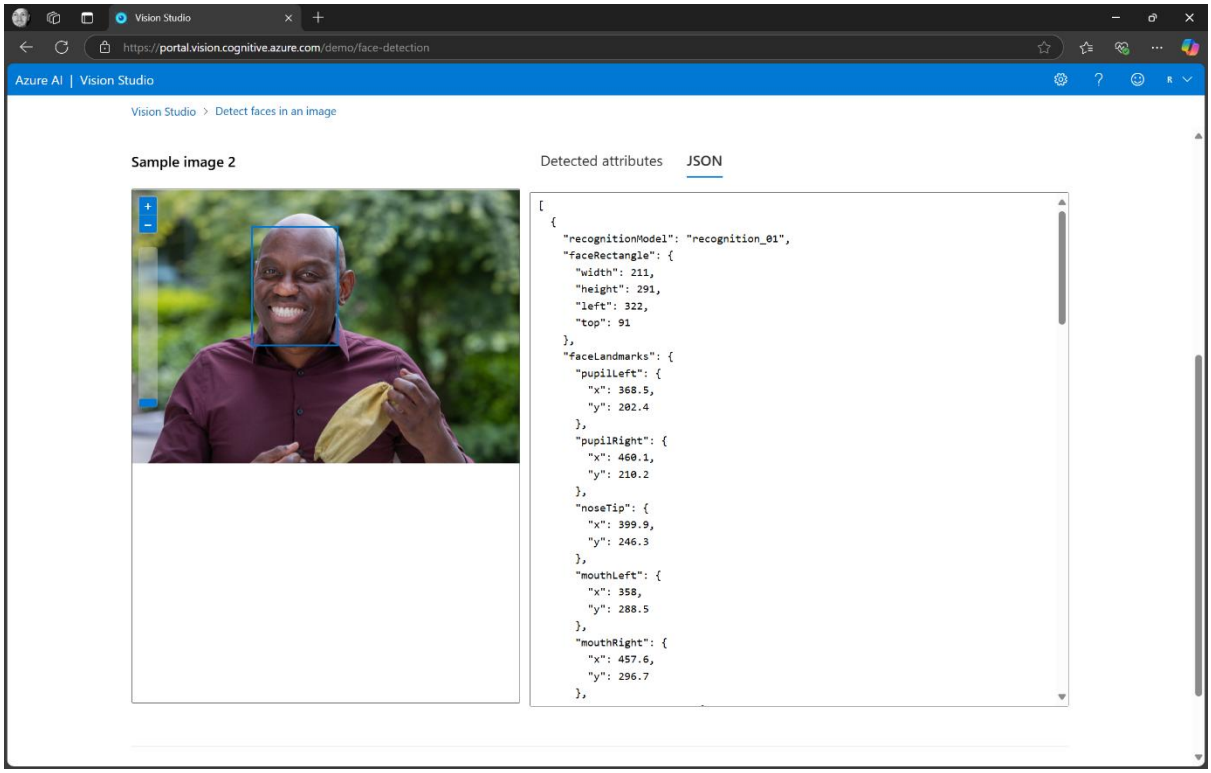


Exercise 3: Face Analysis

This exercise demonstrates how to use Azure AI Vision, Face to detect and analyse human faces in images. Navigate to Azure AI | Vision Studio, log in with your Azure credentials, and then click on the "Face" tab.



01. Iteratively click the samples to the right of the box.

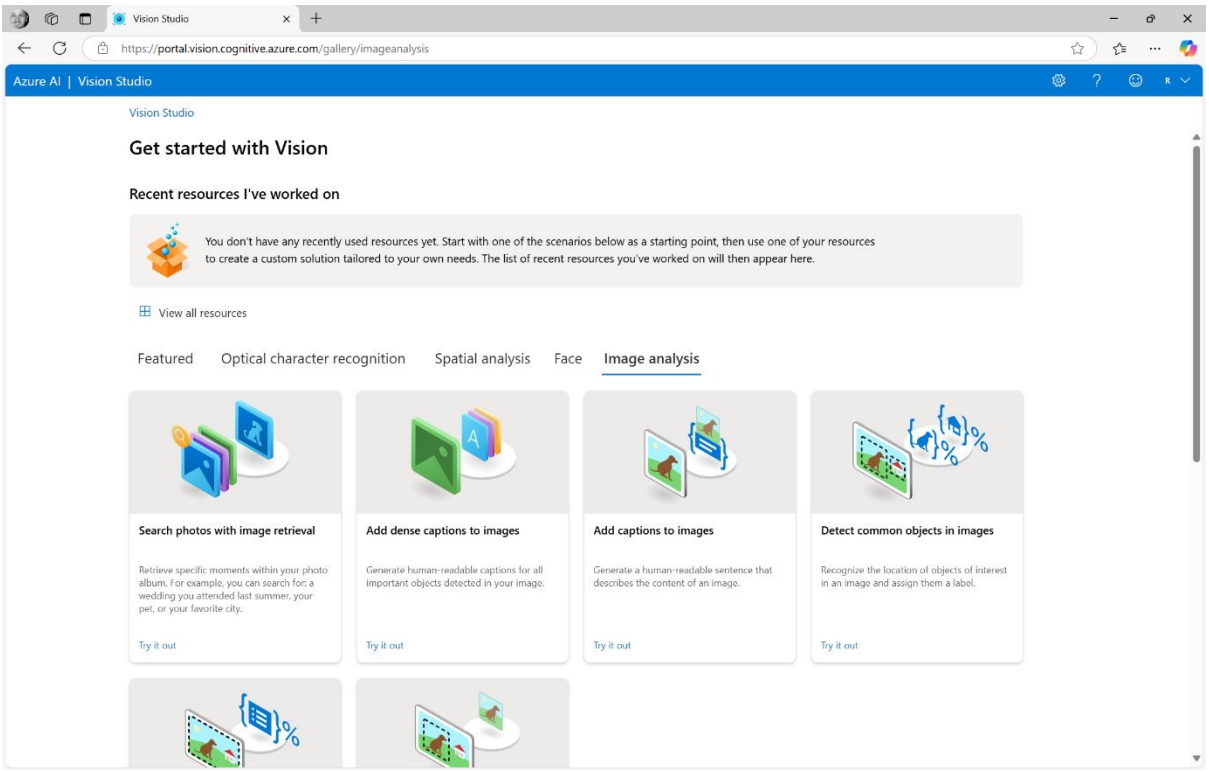


In order to try the Face liveness detection, feature you need to apply access for the service from your subscription.

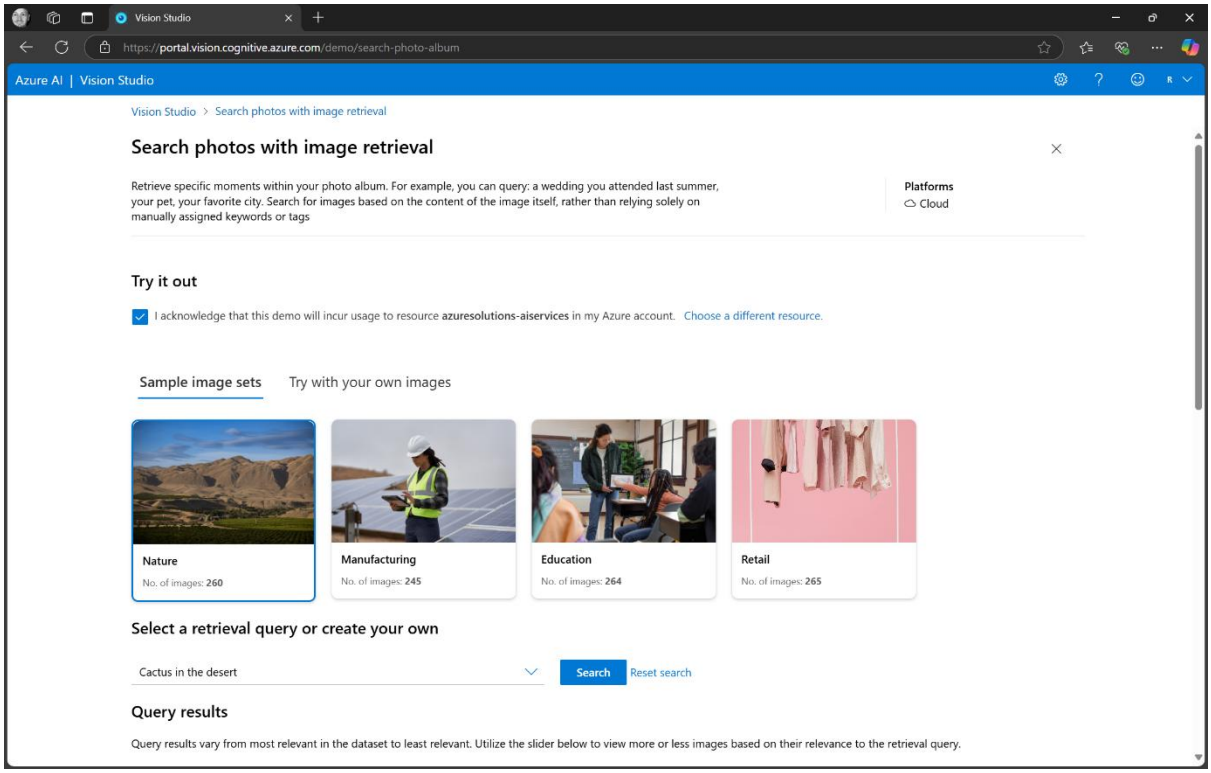
Exercise 4: Image Analysis

This exercise demonstrates how to use Azure AI Vision, Image Analysis to extract meaningful insights from images, including object detection, caption generation, and scene understanding.

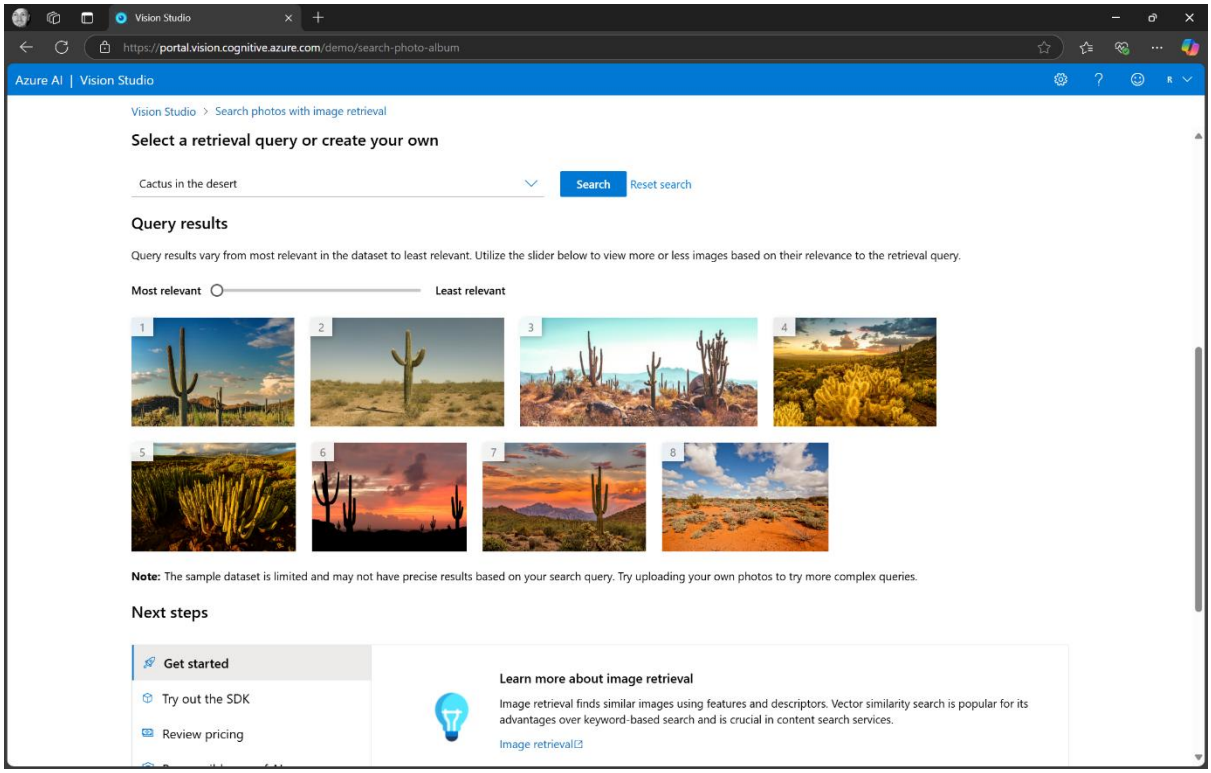
Navigate to Azure AI | Vision Studio, log in with your Azure credentials, and then click on the "Image analysis" tab.



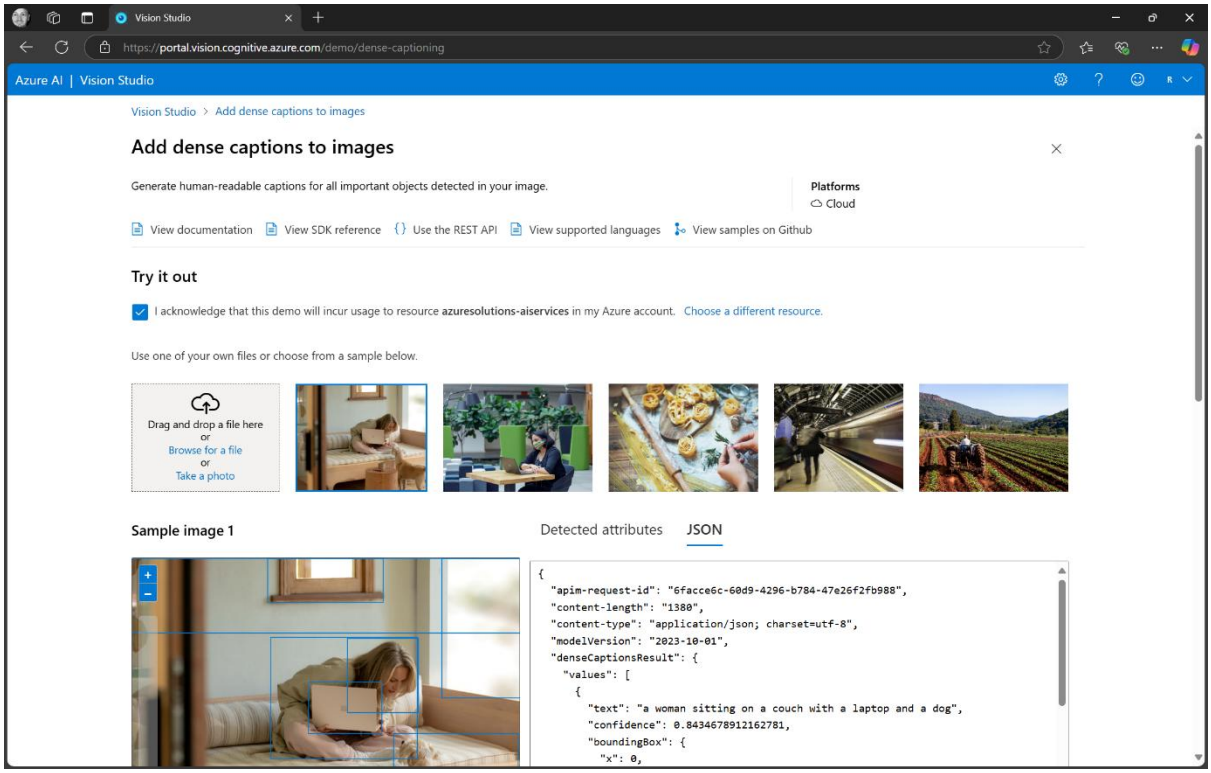
01. Search photos with image retrieval



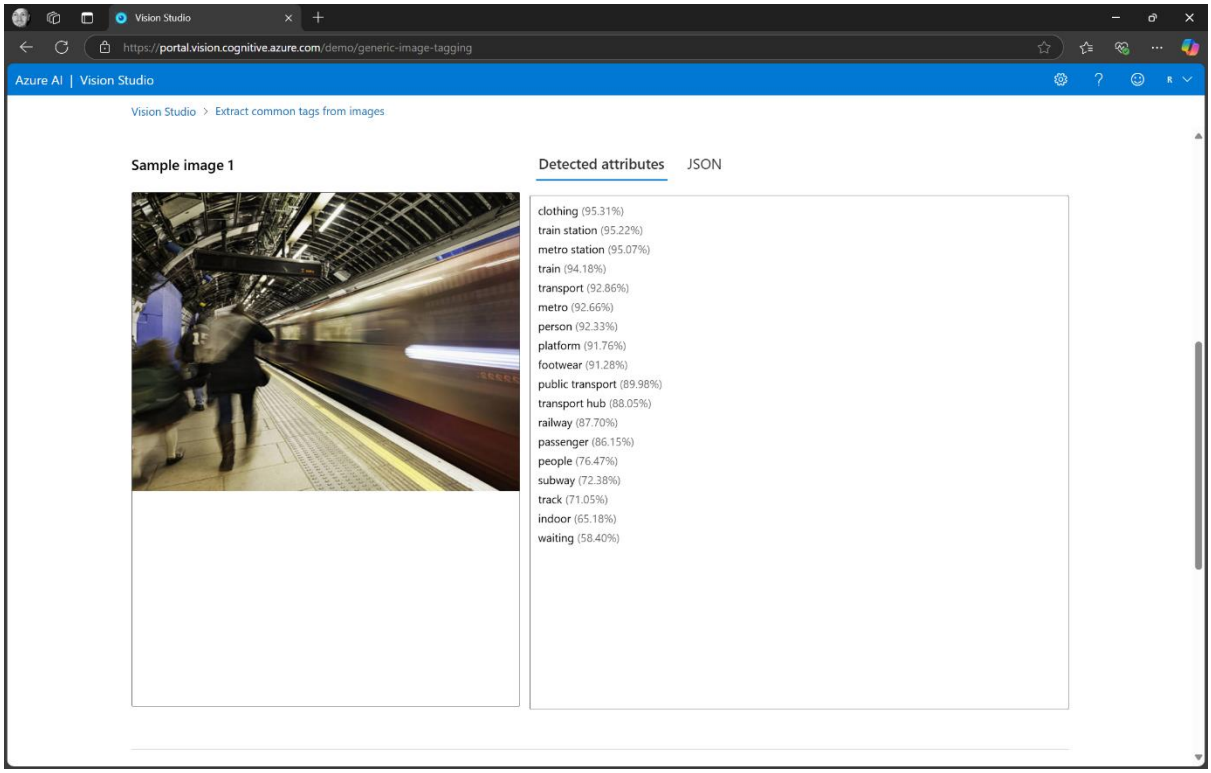
02. Put a natural language query and retrieve relevant images.



03. Try the feature of generating dense captions for the given images.



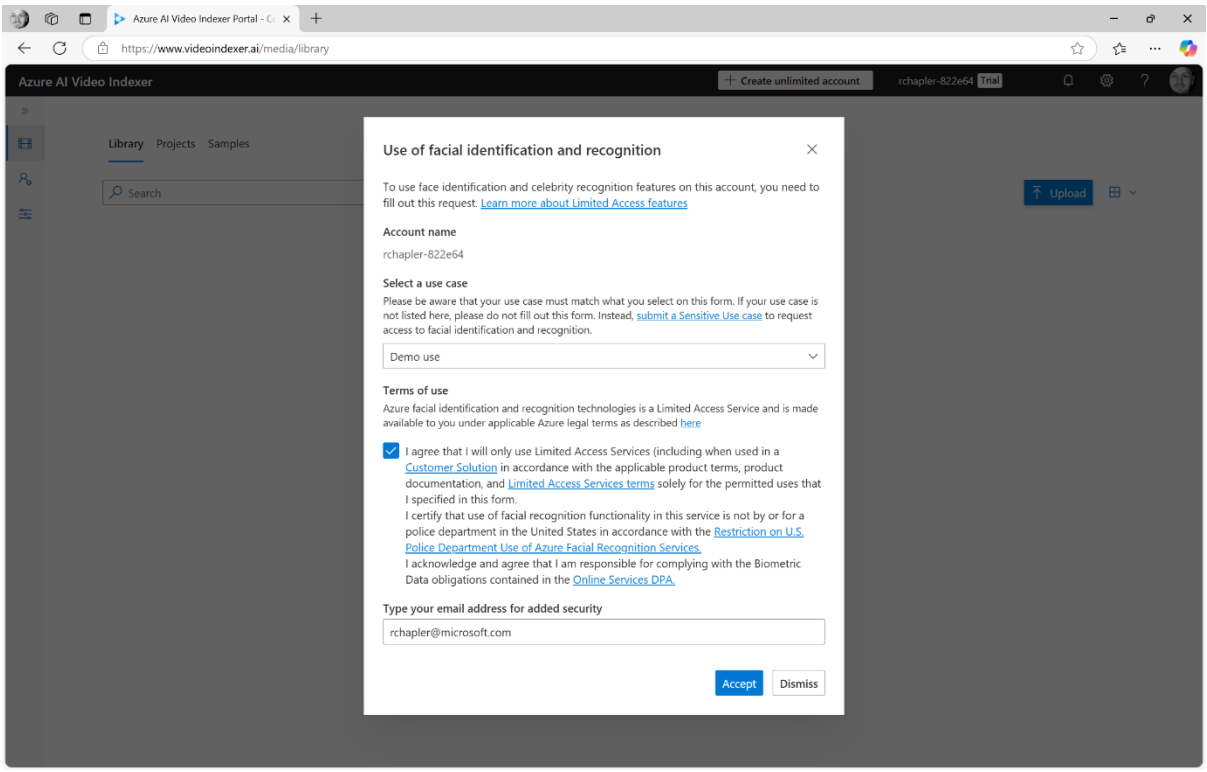
04. To extract common tags from the images, choose the model, language and click the samples to create tags for the given images.



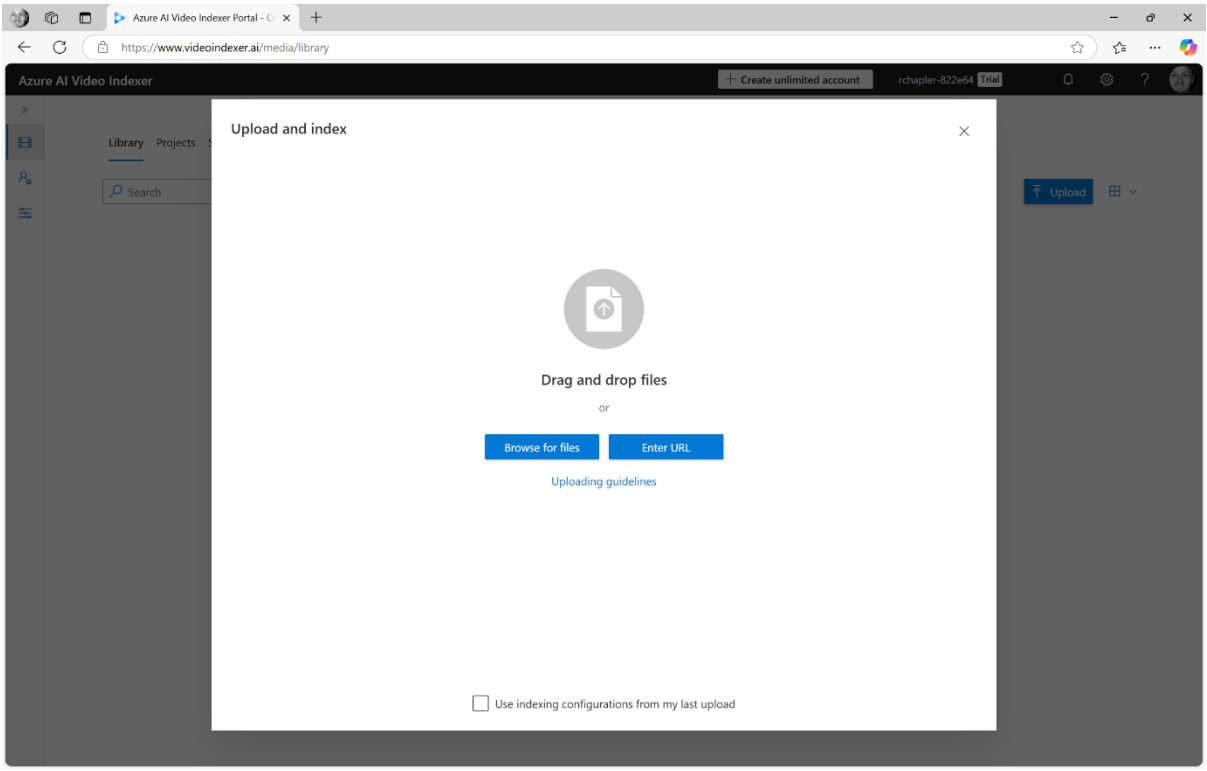
Exercise 4: Video Indexer

With Azure AI Vision Spatial Analysis retiring on 30 March 2025, this exercise introduces you to Azure AI Video Indexer—a robust solution that offers richer video analysis capabilities. You will learn how to analyse videos both via the web portal and programmatically using the Video Indexer API.

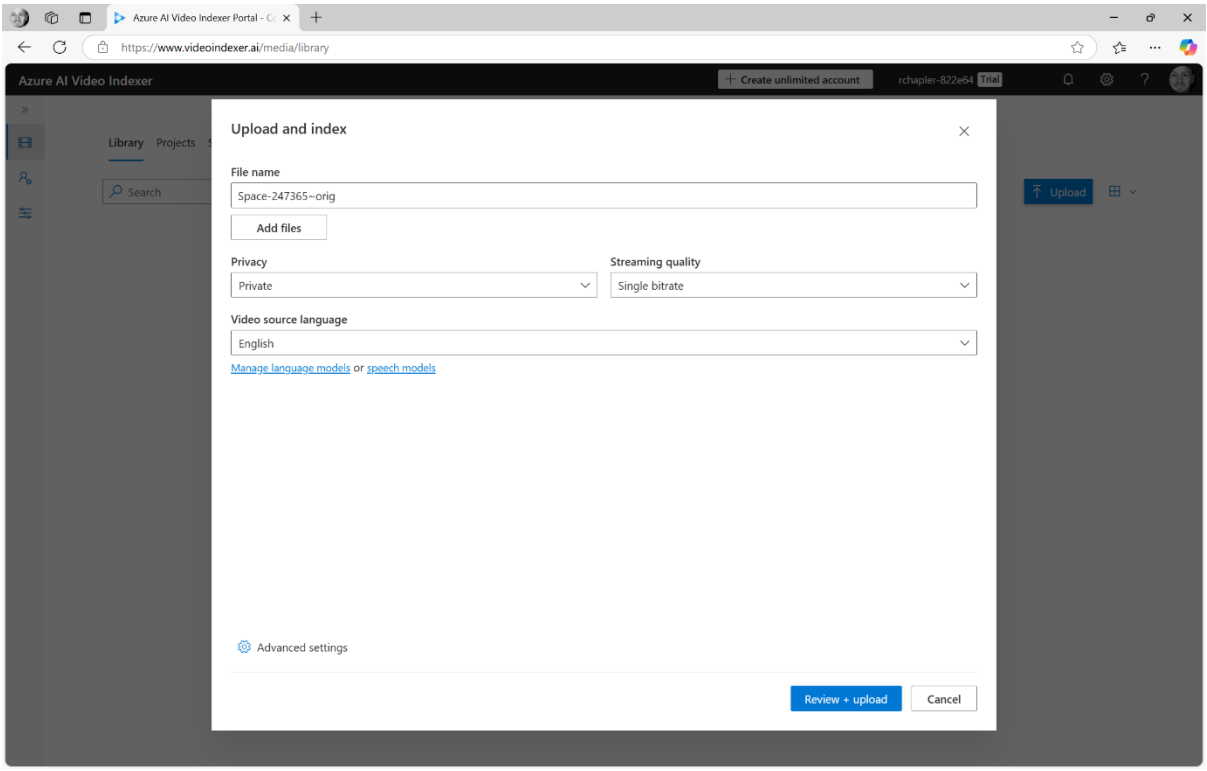
01. Navigate to Azure AI Video Indexer and log in.



02. Complete the "Use of facial identification and recognition" form and then click "Accept".
    a. This popup is expected when you first access Azure's facial identification and celebrity recognition features. Azure requires users to fill out the request form and agree to the legal and compliance terms before enabling these limited access services. Once your use case is verified and access is granted, you should not see this prompt again on subsequent logins.
03. Click on "Upload" and on the resulting "Upload and index" popup, click "Browse for files"



04. Select a video file and click "Open".

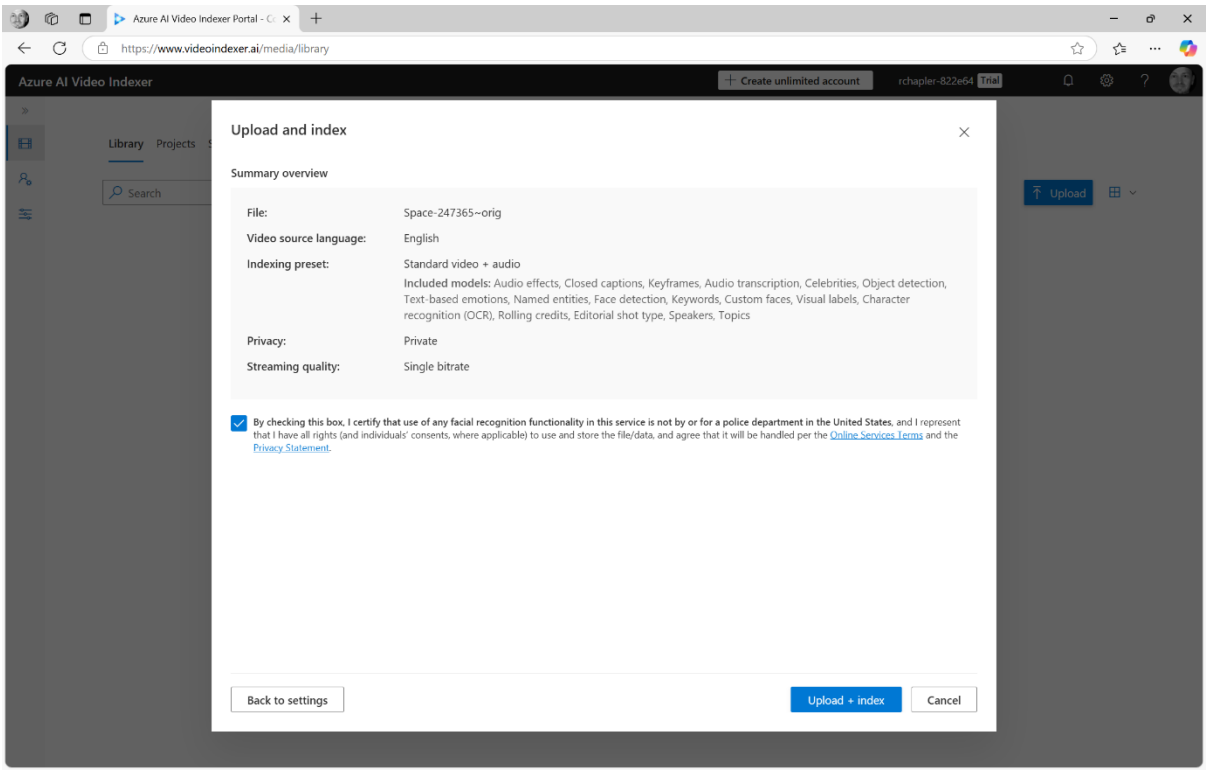


Complete the "Upload and index" popup form:

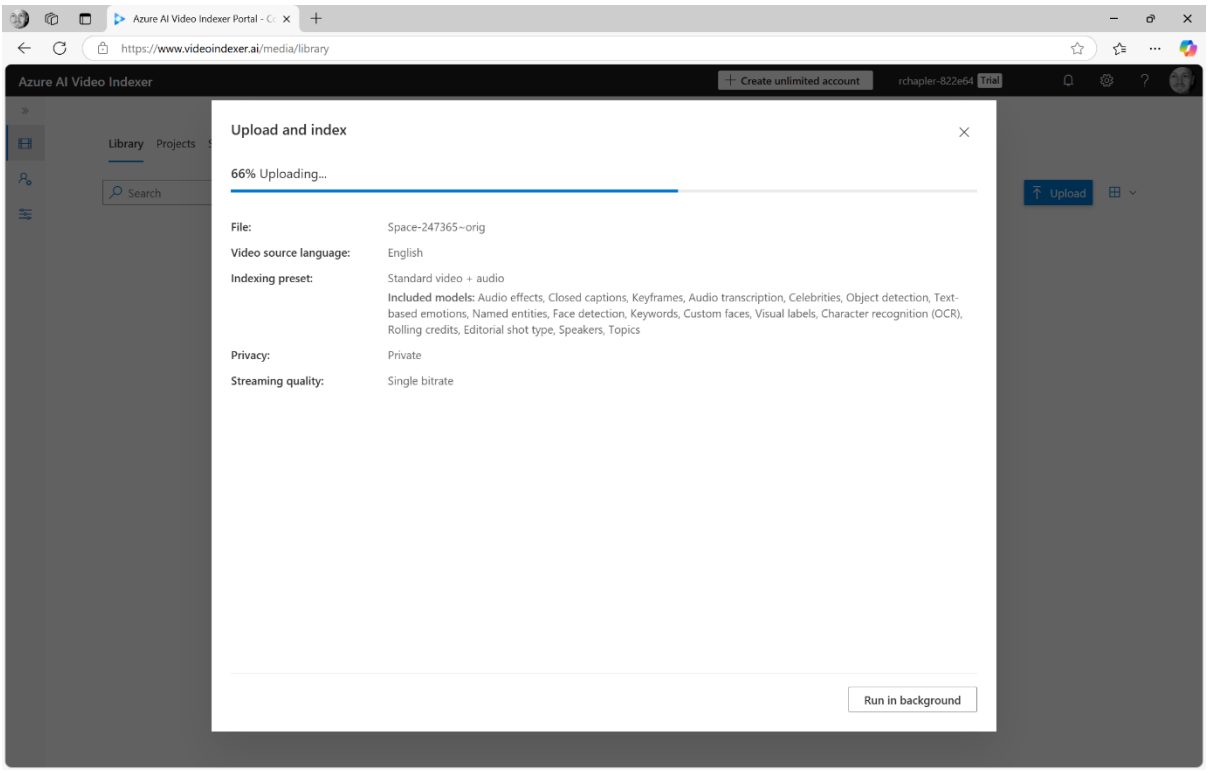
- File name – A display name for the uploaded video. You can keep the default name or change it to something more descriptive.

- Add files – An option to include additional video files if you want to upload more than one at a time.
- Privacy – Determines who can access the video and its insights. Options typically include private (only you can see it) or public (anyone with the link can view it).
- Streaming quality – Lets you select how the video is encoded for playback. Options might include single bitrate or adaptive bitrate, which adjusts to varying network conditions.
- Video source language – Specifies the main spoken language in the video. This setting helps with accurate transcription and speech analysis.
- Manage language model or speech models – Allows you to choose custom language or speech models if you have trained any, or you can use the default settings.
- Advanced settings – Contains additional configuration options like indexing presets or brand detection. These options are usually hidden by default unless you need to fine-tune the analysis.

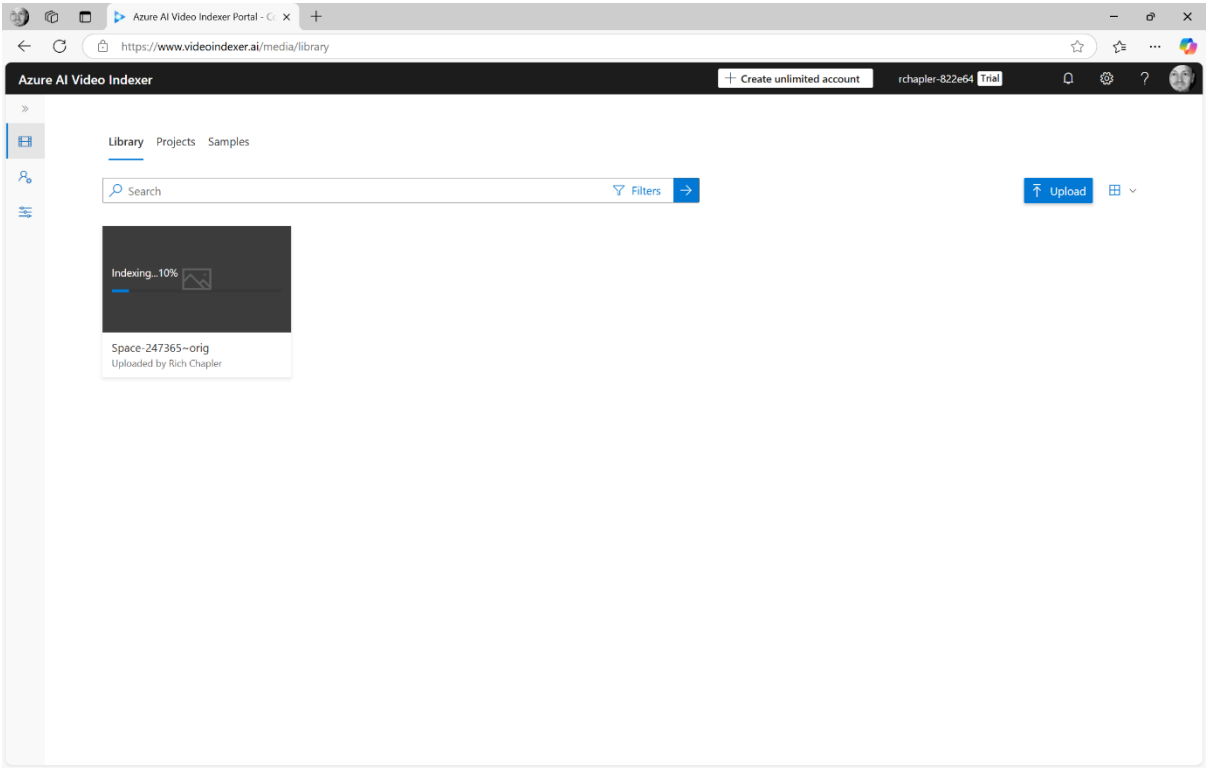
Click "Review + upload".



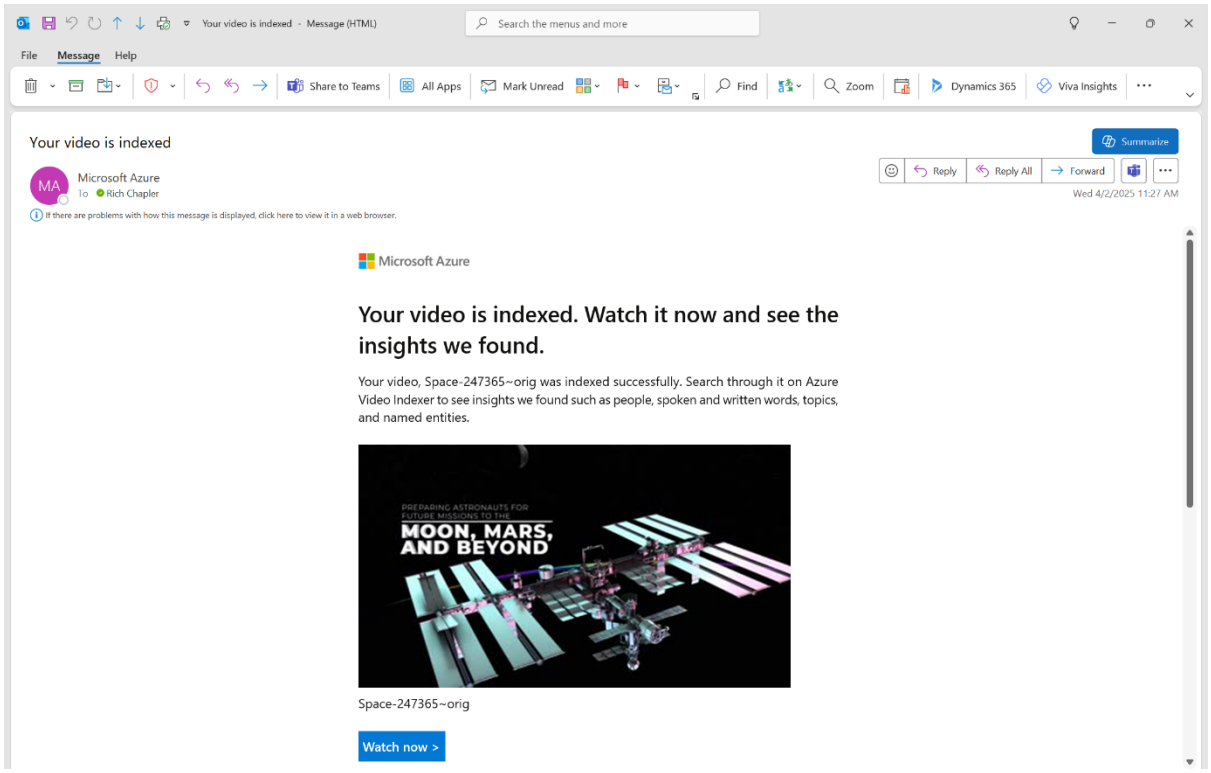
Complete the resulting "Upload and index" form, and then click "Upload + index".



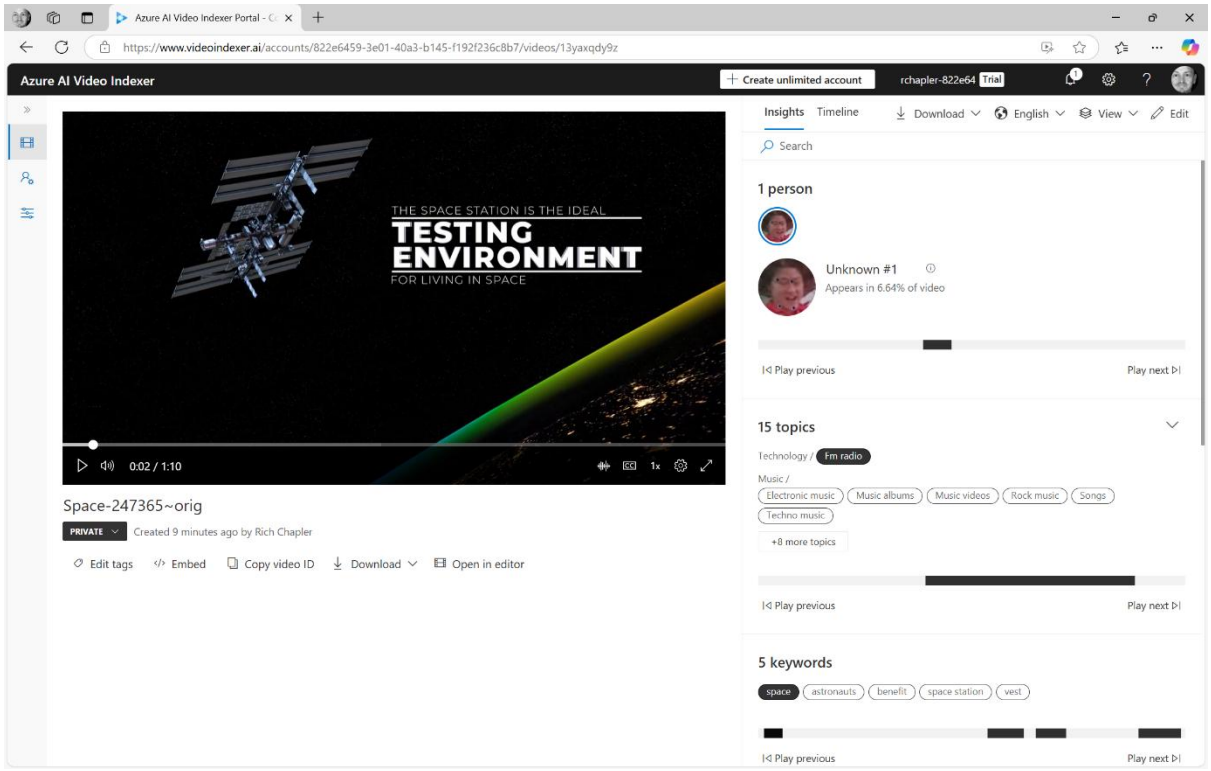
Monitor the progress



Once video processing is complete, you will receive notification email for the provided email.



Click on "Watch now >" in the email or directly on the video in the "Azure AI Video Indexer" interface.



Review information about the video:

- Video Playback Area – shows “Space 32015-orig” playing with an image of the International Space Station

- Insights Panel – includes several data points:
    - Person – shows “1 person”
    - Topic – shows “1 topic”
    - Keywords – shows “3 keywords”
    - Labels – shows “7 labels”
    - Named entity – shows “1 named entity”
    - Scenes - shows "9 scenes" and a thumbnail strip

For the pro-code labs follow the instructions in the Jupyter notebook.