

** 03. 关于 CustomVision **

微软的认知服务接口，让你可以在零机器学习的知识下，用不同编程语言完成相关的机器学习工作

CustomVision就更进一步，让你在没有编程技术下，完成图像识别和物体识别的工作，他是一个零代码解决方案，你只需要一堆图片集就可以完成工作了，对比起认知服务，你还可以直接导出训练模型，直接部署到不同的场景上

输入以下地址可以进入customvision <https://www.customvision.ai/>

The screenshot shows the homepage of the CustomVision AI website. The background is a dark blue with a hummingbird in flight. Overlaid are several glowing blue nodes connected by lines, representing a neural network or graph. The text "Visual Intelligence Made Easy" is centered at the top. Below it is a subtitle: "Easily customize your own state-of-the-art computer vision models that fit perfectly with your unique use case. Just bring a few examples of labeled images and let Custom Vision do the hard work." A "SIGN IN" button is located in the center of the page. At the bottom, there are three main buttons: "Upload Images" (with three small image icons and arrows pointing up), "Train" (with a cloud icon containing a camera and arrows pointing down), and "Evaluate" (with three sets of small image icons and their corresponding accuracy percentages: 89%, 93%, and 91%).

通过低代码方式完成的相关步骤

1. Azure Portal 通过添加资源组，从AI+Machine Learning 创建 Custom Vision

The screenshot shows the Azure portal's resource group overview for "Custom Vision". It includes a summary card with the service name, a Microsoft logo, a rating of 4.3 (44 Azure ratings), and a "Create" button. Below this are tabs for "Overview", "Plans", "Usage Information + Support", and "Reviews". A detailed description box states: "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."

Create

Custom Vision All In One

* Basics 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 Training Prediction

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ Visual Studio Enterprise Subscription ▾

Resource group * ⓘ Create new ▾

Name * ⓘ Enter a name

Training Resource

Select pricing and location for Training Resource

Training location * (US) East US ▾

Training pricing tier (Learn More) * ⓘ ▾

Prediction Resource

Select pricing and location for Prediction Resource

[Review + create](#) [Next : Tags >](#)

2. 打开Custom Vision网站，登录进入Custom Vision 门户

Projects

Project Name: Project Type: Resource:



NEW PROJECT



CLASSIFICATION
AzureLowCodeDemo
kinfey_aml_cv_demo



CLASSIFICATION
AzureMLHOL
kinfey_aml_cv_demo

3. 点击New Project创建你的计算机视觉项目

Create new project

X

Name*

Description

Resource

[create new](#) ▼[Manage Resource Permissions](#)

Project Types i

- Classification
- Object Detection

Classification Types i

- 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)

Custom Vision支持图像分类和实体识别，你可以根据自己的需要选择，这里选择图像分类(Classification)

选择识别多类型单标签(Single tag per image)

建议选择General(compact),这个选项支持多种模型类型的导出，如TensorFlow, ONNX, CoreML等，适应部署到不同终端

4.创建好后进入项目，并添加你需要分类的tag,这里针对bb8,c3po,r2d2三个标签(你可以通过项目的image标签上传对应图片),并针对标签上传基础图片数据#



Showing: all tagged images

A screenshot of the Azure Custom Vision Tags interface showing a grid of images for the 'R2D2' tag. On the left, there's a sidebar with 'Iteration' set to 'Workspace', a 'Tags' section with 'Tagged' selected, and a search bar. The main area displays a 4x3 grid of R2D2 images. A green 'Get started' button is at the bottom right.

5.上传好后，就可以按Train按钮进行训练即可,选择Quick Training

Training Images Performance Predictions Train

Tag images Select all

Add images Delete Tag images Select all Quick test Train 1 2 3 4

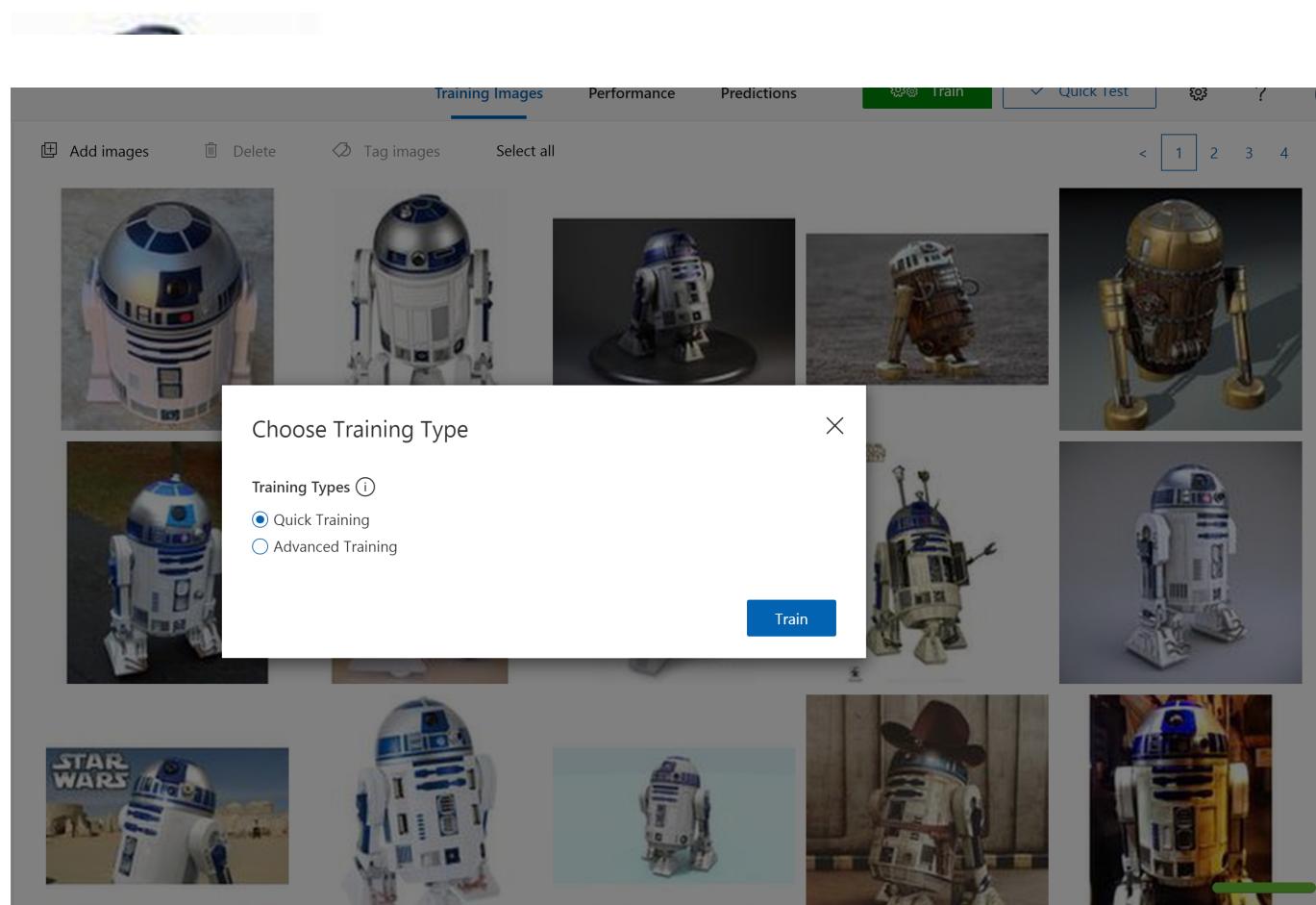
Choose Training Type

Training Types ⓘ

Quick Training

Advanced Training

Train



6. 稍等片刻，你就可以完成相关的训练

The screenshot shows the Azure Custom Vision Iteration 1 performance dashboard. At the top, there are buttons for Publish, Prediction URL, Delete, and Export. On the left, there's a sidebar with 'Iterations' and a probability threshold slider set to 50%. The main area displays training information: finished on 8/21/2021 at 3:22:24 PM using General (compact) domain, iteration id 48ba447a-faec-4806-bdc2-a522cf3dcbf7, and Multiclass (Single tag per image) classification type. Below this, three donut charts show Precision (95.6%), Recall (95.6%), and AP (99.7%). A table titled 'Performance Per Tag' lists two entries: r2d2 with 100.0% precision, 86.7% recall, 100.0% AP, and 76 images; and c3po with 94.4% precision, 100.0% recall, 100.0% AP, and 86 images.

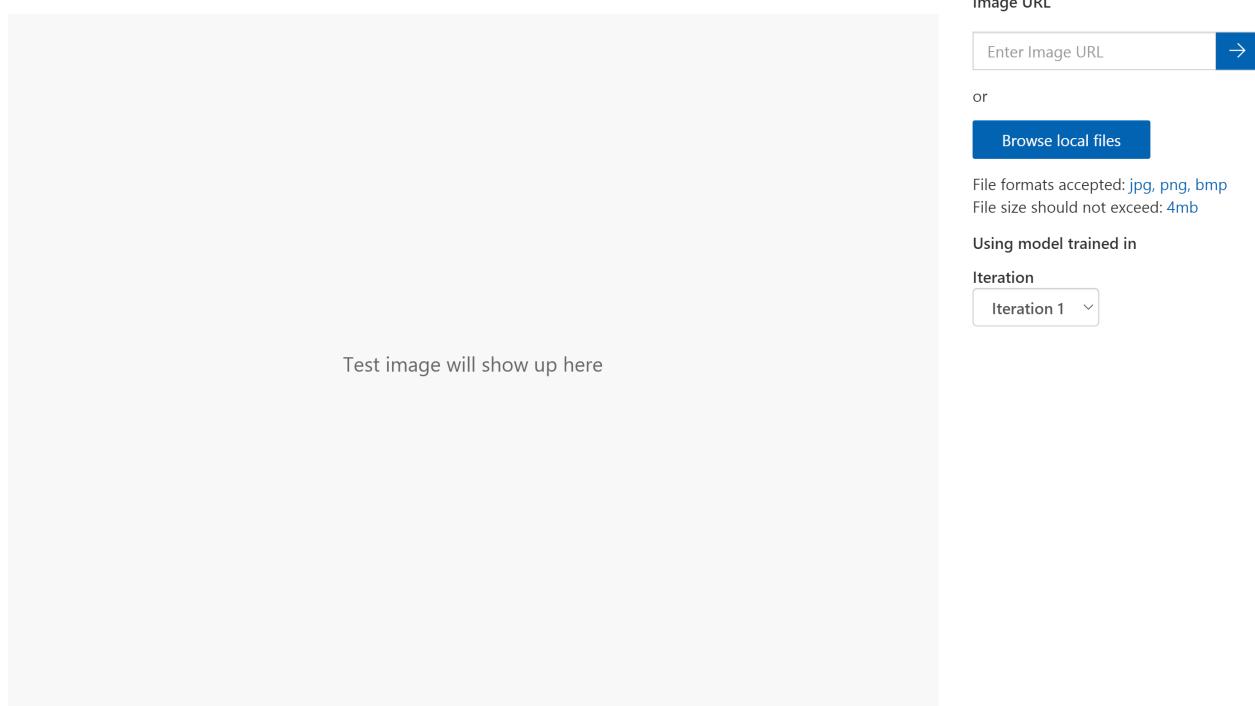
7. 你可以通过Export方式导出你所需要的离线模型

The screenshot shows the Azure Custom Vision export dialog. It displays a list of platforms: iOS (CoreML, iOS 11), TF (TensorFlow, Android), ONNX (Windows ML, ML.NET), DF (Dockerfile, Azure IoT Edge, Azure Functions, AzureML), VAIDK (Vision AI Dev Kit), and OV (OpenVino). The background shows the Iteration 1 performance dashboard with the same data as the previous screenshot.

**8. 你可以通过Quick Test完成测试

Quick Test

X



你现在一行代码都没有写过，哈哈做计算机视觉也不是很难
