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ITAI-2372-Artificial Intel Applications
L02 Lab 02 On Skillable

Reflective Journal

Module Overview

In this module, I used Azure AI Vision Studio to explore various image analysis capabilities, such as generating captions, tagging images, and detecting objects. The exercise simulated a scenario where a retailer, Northwind Traders, wanted to use Azure AI to create a "smart store" capable of monitoring customer needs and assisting them through AI-driven insights.

Steps and Learning Outcomes

1. Creating an Azure AI Services Resource

I set up an Azure AI services resource with a unique resource name and configured it with a Standard S0 pricing tier. By linking this resource to Vision Studio, I ensured that all image analysis operations would have access to Azure's AI functionalities, laying the foundation for advanced image analysis.

2. Generating Captions for Images

I began the image analysis process by generating captions for images representing typical retail scenarios. The Caption and Dense Caption features provided single-sentence descriptions and multiple object-specific descriptions. This feature emphasized how image captions can quickly convey context, which could assist employees in identifying customer needs at a glance.

3. Extracting Tags from Images

The tag extraction function analyzed a shopping-related image, identifying common objects and actions with confidence scores. This exercise demonstrated how tag extraction can categorize image content and provide detailed insights—such as identifying a person shopping or standing—that retailers could use to track customer engagement in various sections of the store.

4. Object Detection

I used object detection on an image depicting a customer with a shopping cart, where the feature detected multiple objects with bounding boxes and confidence scores. By adjusting the threshold slider, I could focus on high-confidence objects only. This task illustrated object detection's role in accurately identifying items of interest, enhancing real-time monitoring capabilities within a retail environment.

5. Resource Cleanup

After completing the exercises, I returned to the Azure portal to delete the created resources, preventing unnecessary costs.

Professional Application

This module was an invaluable refresher to Azure AI Vision's image analysis tools, with practical experience into the various analysis methods, in customer service and retail management applications. From a professional perspective, I see how these image analysis capabilities could be applied in cybersecurity for analyzing images and detecting suspicious patterns or objects, contributing to enhanced monitoring systems.

Screenshot Of Completion:

