Morathi Lincoln Mnkandla

ITAI-2372-Artificial Intel Applications

L04 Lab 04 On Skillable

Reflective Journal

Module Overview

In this module, I used Azure AI Document Intelligence Studio to analyze and extract data from receipts. Document Intelligence builds on optical character recognition (OCR) by structuring extracted data, such as key-value pairs and tables, which makes it easier to process and store information. This exercise simulated a scenario where the fictitious retailer Northwind Traders utilized Document Intelligence to enhance data capture from transaction receipts.

Steps and Learning Outcome

1. **Logging In and Setting Up the Azure Resource**
   I logged into the Student account and accessed Azure using the provided subscription credentials. In the Azure portal, I created a Document Intelligence resource within **`ResourceGroup1`** using a unique resource name and the free F0 pricing tier. This setup enabled access to Document Intelligence's capabilities for document analysis.
2. **Receipt Analysis in Document Intelligence Studio**
   After downloading a sample Northwind Traders receipt, I opened Document Intelligence Studio and selected the prebuilt model trained for receipts. By uploading the receipt and running an analysis, I observed how the service recognized and extracted structured data fields such as the merchant's name, address, phone number, transaction date, subtotal, tax, and total. Each extracted field was accompanied by a confidence score, indicating the accuracy of recognition.
3. **Exploring Additional Features and Cleanup**
   I tested other sample receipts, including some in different languages, to see how Document Intelligence handled diverse document types. After completing the exercises, I returned to the Azure portal to delete the created resources, ensuring no unnecessary costs would be incurred.

Challenge Faced

1. navigating between different sample receipts, especially those in other languages, required a bit more time as I adjusted to the different data output structures and confidence scores provided by the service.

Professional Application

This module reinforced my knowledge of Document Intelligence's data extraction and structuring capabilities, which can be important in automating data processing in fields that manage large volumes of documents, like retail, finance, or healthcare. From a cybersecurity perspective, these capabilities could also be adapted to monitor and analyze document-based patterns or anomalies, supporting more efficient document handling and risk management in secure environments.