 

Optical Character Recognition using Microsoft Azure Cognitive Services

Functional Specification

IoT Cart

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# Change Log

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| **Date** | **Author** | **Update** |
| 4/17/2020 | Josh Heitzman | First Draft |

# Purpose

This document will show a basic demonstration of:

1. the text recognition capabilities of the Computer Vision resource included in the Azure Cognitive Services suite,
2. and storing data in Azure SQL.

# Scope

This document identifies the hardware, software, and Azure services used for the OCR scenario.

# Hardware

This scenario requires the use of an OpenCV compatible camera (typically most USB cameras) attached to a device running Windows or Linux that has a local copy of the code for this scenario.

# Azure Services

1. Azure Cognitive Services: Computer Vision
2. Azure SQL DB

See the documented named “OCR - Step by Step.docx” for detailed setup instructions for the services.

# Definitions and Acronyms

1. **OCR** – optical character recognition

## Architecture

The data flow is shown in the diagram below and is:

1. raw image data is captured from the camera by the device as a PNG file,
2. the device sends the PNG file to the Azure Computer Vision resource,
3. the Azure Computer Vision resource returns its text recognition result to the device,
4. and the device processes the words into a single string and inserts that string in the Azure SQL Db.

Azure Computer Vision resource

Camera

Azure SQL DB

Device

# Code

See the last 3 sections of the “OCR - Step by Step.docx” for the entry points to the code.