#GlobalAzure

May 13th, 2023 Sofia, Bulgaria



Our Sponsors



Deloitte.







mentormate











#Bulgaria

Document processing with Azure Forms Recognizer

Radi Atanassov

Chief Architect, OneBit Software



Agenda

- 1. What is Intelligent Document Processing
- 2. Azure Form Recognizer
- 3. Azure Form Recognizer Studio
- 4. Demo's
- 5. Questions



C:\users\radi>whoami

Radi Atanassov

- CEO & Chief Architect at OneBit Software
- Founder @ Quantum DMS
- LP at Eleven Venture Capital Fund
- Senior Director at Telerik/Progress
- Ex-Microsoft OfficeDev PnP Core Team Member
- Lecturer @ SoftUni
- Conference speaker since 2009
- Failed Sound Engineer
- Failed Rock Star...

Microsoft Certified Master: SharePoint Server 2010

Microsoft Certified Solutions

Master - SharePoint

SharePoint

SharePoint

Microsoft Certified Trainer

8-time Microsoft Most Valuable Professional

Certified Scrum Master

SharePoint User Group Bulgaria





Microso





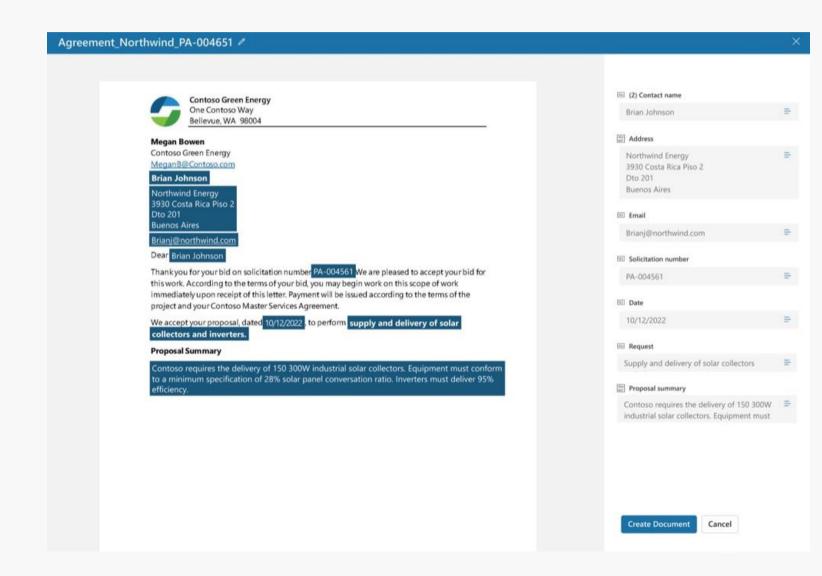






New industry terms

- Intelligent document processing
- Document understanding
- Content Al
- Document Al
- Al-led business process automation
- Vision Document Intelligence



Features - OCR

- "Read" the text
- Structured documents: Content extraction
- Images: OCR



. Besuchen Sie die IRS-Website unter www.irs.gov oder

Publication 3067 EN-DE (Rev. 10-2017) Catalog Number 53671Z Department of the Treasury Internal Revenue Service www.irs.gov

⊕ Q (â) ⊙

· Wenden Sie sich an Ihren Steuerberater.

Content



IRS-Unterstützung in IRS Katastrophenfällen

VAV

Von der US-Bundesregierung erklärt Sie können den vollständigen oder Kraftfahrzeuge infolge einer Besch Bundeseinkommenssteuererklärung ab dem der Katastrophenfall eintrat, 1040X (Amended U.S. Individual Inc Vorjahr absetzen, anstatt zu warte Weise können Sie sich Ihre Steuern haben, teilweise oder ganz erstatt Was das für Sie bedeutet

- · Wenn Sie im vorausgegangenen Ste Bundessteuern bezahlt haben ... o können Sie jetzt u. U. eine abge warten), um Ihren Verlust geltend
- o Sie müssen Ihre Abzüge auf Formu So machen Sie Ihren Verlust gelten
- · Fertigen Sie eine Liste Ihres ge

Stellen Sie die Anschaffungskosten Stellen Sie den Verkehrswert jedes o Dabei handelt es sich um den Bet Katastrophenfalls hätte verkauft w

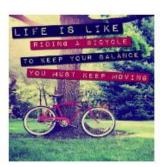
Stellen Sie den derzeitigen Wert -Stellen Sie Versicherungs- oder an voraussichtlich erhalten werden. So können Sie sich bei der Geltend . Besorgen Sie sich die IRS-Publik

Materialien für Katastrophenfälle)

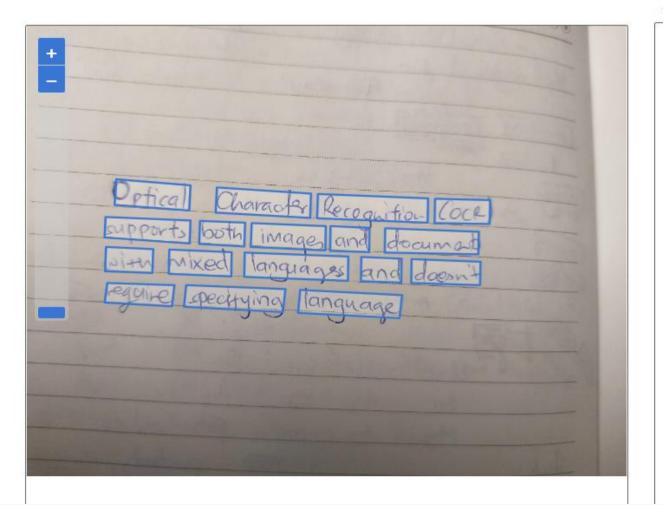
#GlobalAzure











Detected attributes JSON

Optical Character Recognition (OCR) supports both images and document with mixed languages and doesn't require specifying language

GENERAL SERVICES ADMINISTRATION	SUPPLEMENTAL AGREEMENT DA C	
PUBLIC BUILDING SERVICES	No. 3 /2/13/10	-
OTTON DESCRIPTION OF A CONTROL OF THE CONTROL OF TH	TO LEASE NO.	
SUPPLEMENTAL LEASE AGREEMENT ADDRESS OF PREMISE	GS-03B- 02B-23561	
2 Court Street, Binghamton,	New York 13901	
HIS AGREEMENT, made and entered into this date by and		
whose address is 122 State Street, Binghamton, New Yo	rk 13901	
ereinafter called the Lessor, and the UNITED STATES OF	AMERICA, hereinafter called the Government:	
WHEREAS, the parties hereto desire to amend the above Lea	ase to reflect a change of ownership and payee.	
NOW THEREFORE, these parties for the considerations her as follows:	einafter mentioned covenant and agree that the said Lease is am	ended
 The heading of this lease is amended by dele following: 	ting the existing text and substituting, in lieu thereof,	the
"This lease made and entered into this date by Binghamton, New York 13901."	and between Vitaluna LLC, who's address is 122 State	Street
2. Paragraph 15 of the Rider to the lease is ame shall be made payable to" and substituting, in	ended by deleting the portion of the text following "Ren n lieu thereof, the following:	nt check
mm.1	V-1-12004 B	
"Vitaluna LLC, 112 State Street Binghamton, Ne	w York 13901."	
3. Payment of rent checks shall be sent electron	nically to:	
	12	
4. GSA Form 3518 (Rev 1/07) is attached hereto	and made a part of this Supplemental Lease Agreeme	nt.
All other te <mark>signature: 99%tions</mark> of the lease shall remain in fo	rce and effect.	
Ath		
N Signatur Cook EREOA he parties subscribed their name	s as of the above date	
LE JOY TO PHILIP IN LICE		
/ 1 10/11 \ 1	others: 97%	
w INVIV	Marker	
(Signature)	(Title)	
HS 92% RESENCE OF	others: 99%	
Culter Chapman	122 state St , Burghar Hori , Ny	
signature 90%	1390/	
UNITE STATE OF AMERICA SEPTEMAL SERVICE	ES ADMINISTRATION	
Maria La Jakes	ES ADMINISTRATION Contracting Officer	

#GlobalAzure

Features - OCR

les objectifs de notre mission tels que nous les avons fixés lors de notre dernier entretien ainsi que la nature et les limites de celle-ci.

1. Votre entreprise

Votre société PAWA, est en cours de création.

Son activité essentielle sera le développement de solutions numériques éco engagée.

Votre organisation comptable actuelle repose sur un système informatique sous-traité

Content

Polygon

Son activité essentielle sera le développement de solutions numériques éco engagée.

1.2577, 6.3316, 5.614, 6.2161, 5.6185, 6.3862, 1.2622, 6.5016

Text Barcodes Formulas

Vous avez bien voulu nous consulter en qualité d'expert-comptable pour nous confier une mission de présentation des comptes annuels de votre société. Nous vous remercions de cette marque de confiance.

e lettre est établie afin de se conformer aux dispositions de l'article 151 du Code de déontologie intégré au 30 mars 2012, relatif à l'activité d'expertise comptable. Elle a pour objet de vous confirmer les termes et les e notre mission tels que nous les avons fixés lors de notre dernier entretien ainsi que la nature et les limites

2. Notre mission

2.1 Nature, objectifs et limites de la mission

La mission que vous envisagez de nous confier est une mission de présentation des comptes annuels. Elle sera effectuée selon les dispositions de la norme professionnelle du Conseil Supérieur de l'Ordre des Experts comptables applicable à cette mission et des textes légaux et réglementaires applicables aux professionnels de l'expertise comptable que nous sommes tenus de respecter.

Elle a pour objectif de nous permettre d'exprimer une assurance de niveau modéré sur la cohérence et la vraisemblance des comptes de votre entité.

Cette mission n'a pas pour but de déceler des erreurs, actes illégaux ou autres irrégularités pouvant ou ayant eu lieu dans cette entité.

Nos travaux consisteront à vous assister pour la clôture des comptes et leur présentation d'ensemble.

Siège social - 26 / 28 rue Marius Aufan, 92300 LEVALLOIS PERRET - Tél. 01 41 49 06 66 - Fax. 01 41 49 06 67 SARL au capital de 3 941 800C - RCS Nanterre 324 021 542 - APE 6920 Z





Paragraph

1. Votre entreprise

Paragraph

Votre société PAWA, est en cours de création.

Paragraph

Son activité essentielle sera le développement de solutions numériques éco engagée.

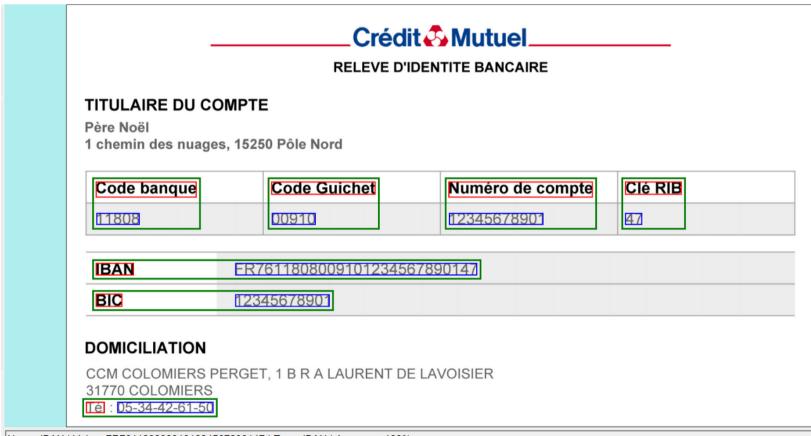
Paragraph

Votre organisation comptable actuelle repose sur un système informatique sous-traité.

Paragraph

Features – Key-value Pairs

Detects labels and values



Name: IBAN | Value: FR7611808009101234567890147 | Type: IBAN | Accuracy: 100%

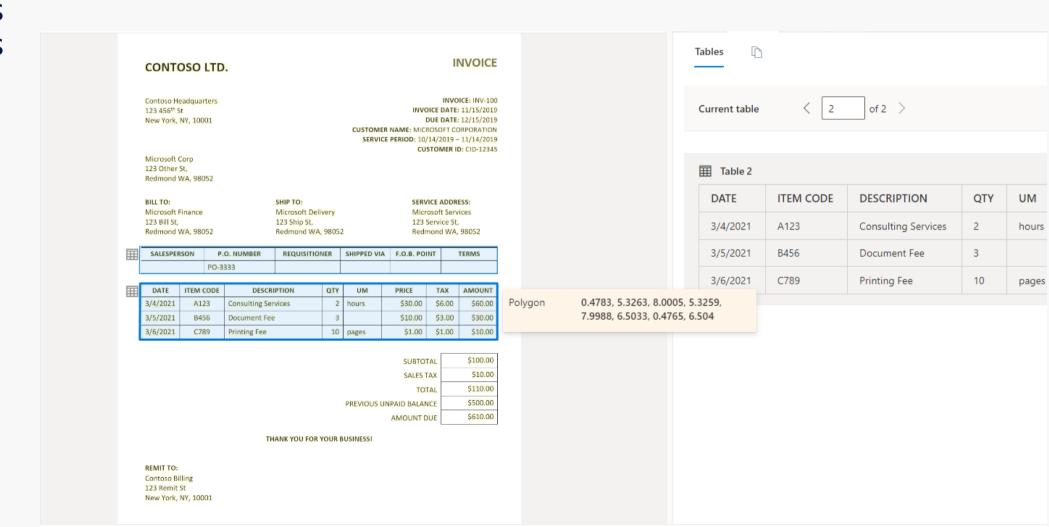
Name: Tél | Value: 05-34-42-61-50 | Type: PhoneNumber | Accuracy: 100% Name: Code banque | Value: 11808 | Type: Number | Accuracy: 74% Name: Code Guichet | Value: 00910 | Type: Number | Accuracy: 74%

Name: Numéro de compte | Value: 12345678901 | Type: Number | Accuracy: 93%

Name: Clé RIB | Value: 47 | Type: Number | Accuracy: 74% Name: BIC | Value: 12345678901 | Type: Number | Accuracy: 75%

Features – Table extraction

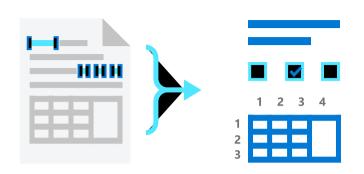
- Detects rows and columns
- Checkboxes

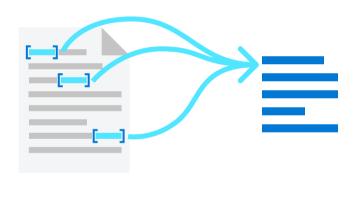


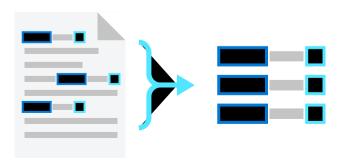
#GlobalAzure

Use-cases

- Document classification
- Search in documents
- Extract data from forms
- Extract data from "unstructured documents"
- Validate -> automate
- Document redaction
- Document translation
- Document summarization
- Document auto-labelling



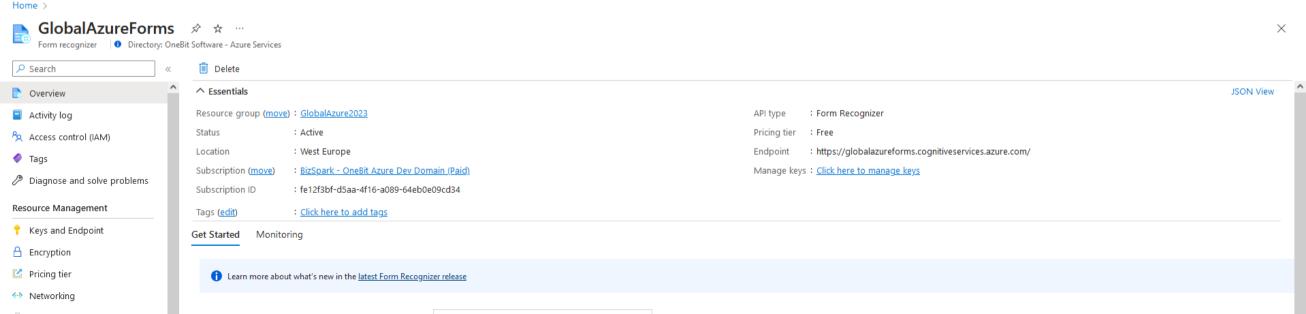




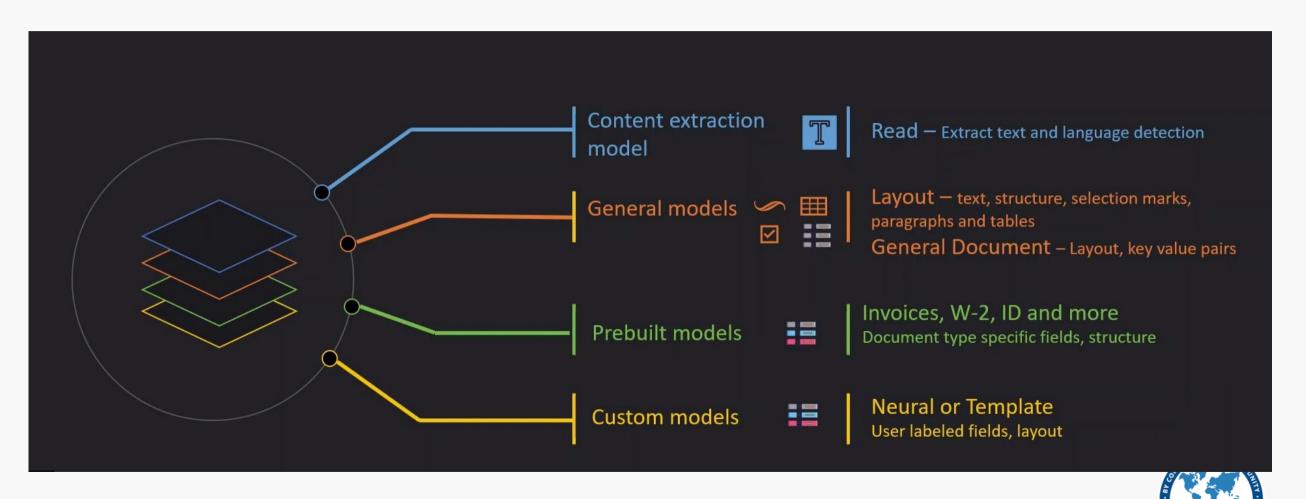


Azure Applied Al

- Cloud-based service, part of Azure Cognitive Services
- For developers
- Build Intelligent Document Processing solutions



Pre-built models



Pre-built models

- Read, Layout, General Document
- Invoices
- Receipts
- Business Cards
- Identity documents
- Health insurance cards, Contracts
- US Tax: W-2, 1098, 1098-E, 1098-T



Custom models



Train custom models to classify documents and extract text, structure and fields from your forms or documents.



Custom extraction model

Label and build a custom model to extract a specific schema from your forms and documents.

Create new



Custom classification model

Build a custom classification model to split and classify documents.

Create new



Azure Applied Al

- Connect to it through an API
- Supports data-at-rest encryption
- Networking
- Used together with Form Recognizer Studio



Content

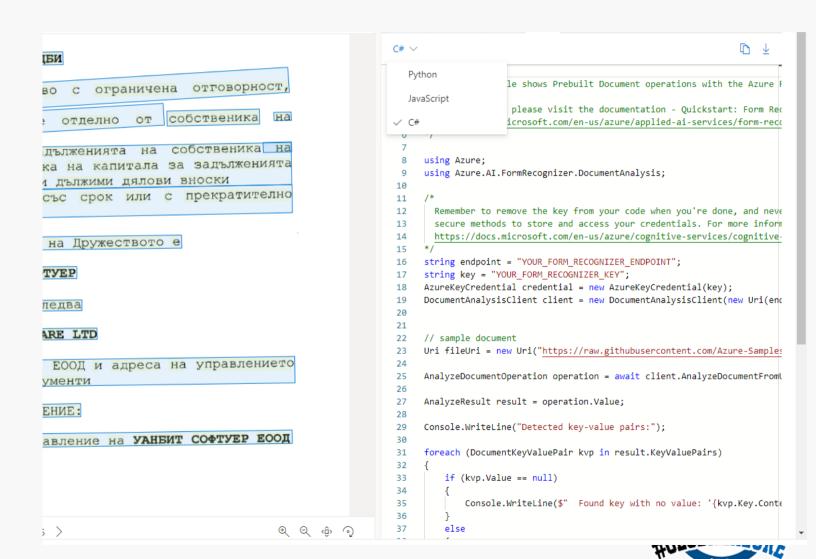
- JSON result object
- Content
- Pages
- Tables
- Key-value pairs
- Entities
- Documents





Code

- Python
- JavaScript
- C#



#Bulgaria

Azure Form Recognizer Studio

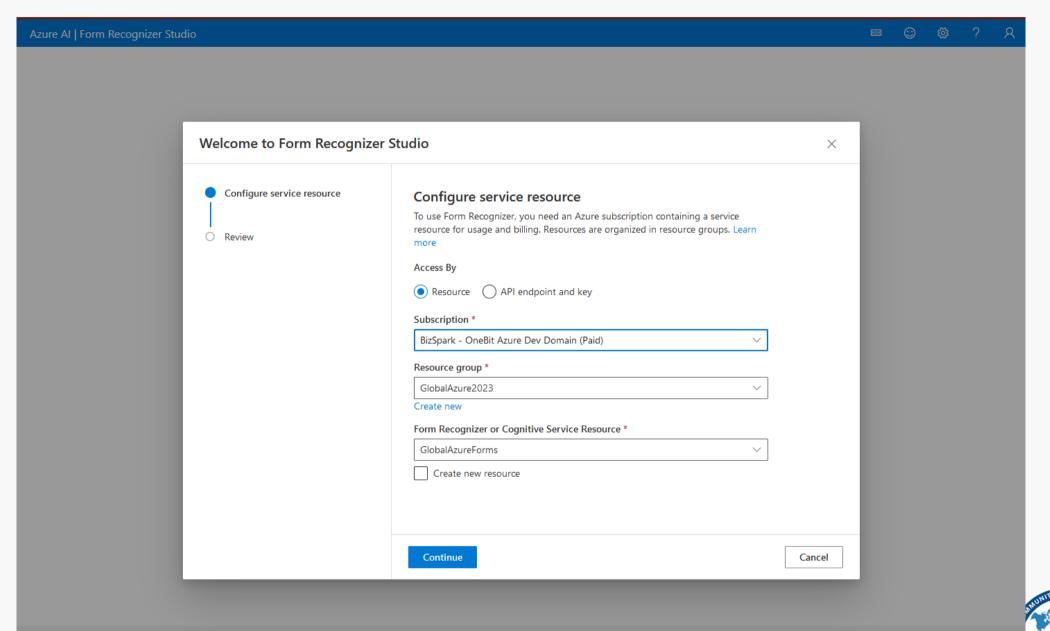


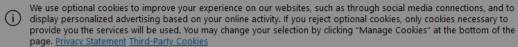
Azure Form Recognizer Studio

Azure Applied Al

- Connects to your Azure Form Recognizer service
- A "UI" for the "API"
- https://formrecognizer.appliedai.azure.com/







Accept

Reject

Manage cookies



Azure Form Recognizer Studio

Azure Al | Form Recognizer Studio











Form Recognizer Studio

Get started with Form Recognizer Studio

Extract text, key-value pairs, tables, and structures from forms and documents using common layouts and prebuilt models, or create your own custom models. Learn more

Document analysis

Extract text, tables, structure, key-value pairs, and named entities from documents.



Read

Extract printed and handwritten text from images and documents.

Try it out



Layout

Extract tables, check boxes, and text from forms and documents.

Try it out



General documents

Extract key value pairs and structure like tables and selection marks from any form or document.

Try it out



General documents with query fields

Extract key value pairs and structure like tables and selection marks from any form or document.

Private preview - sign up.



up.

Prebuilt models

Extract data from unique document types using the following prebuilt models.



Invoices

Extract invoice ID, customer details, vendor details, ship to, bill to, total tax, subtotal, line items and more.



Receipts

Extract time and date of the transaction, merchant information, amounts of taxes, totals and more.



Business cards

Extract person name, job title, address, email, company, and phone numbers from business cards.



Identity documents

Extract name, expiration date, machine readable zone, and more from passports and ID cards.



DEMO: Azure Form Recognizer Studio



#Bulgaria

Developer Story

Code: https://github.com/OneBitSoftware/Azure-Form-Recognizer-Demo



Development Story

- .NET
- Java
- JavaScript
- Python



Development Story

```
.NFT CIT
                                                                                      PA Copy
dotnet add package Azure.AI.FormRecognizer --version 4.0.0
                                                                                       Ph Copy
C#
using Azure;
using Azure.AI.FormRecognizer.DocumentAnalysis;
C#
                                                                                                   PA Copy
//set `<your-endpoint>` and `<your-key>` variables with the values from the Azure portal to create yo
string key = "<your-key>";
string endpoint = "<your-endpoint>";
AzureKeyCredential credential = new AzureKeyCredential(key);
DocumentAnalysisClient client = new DocumentAnalysisClient(new Uri(endpoint), credential);
```

What can you do?

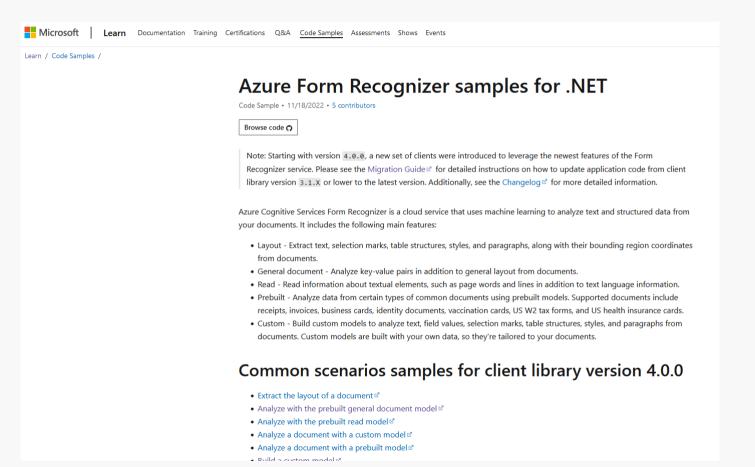
- DocumentAnalysisClient -> Analyze (stream, URI)
 - ClassifyDocumentAsync (v4.1-beta1)
- DocumentModelAdministrationClient
 - BuildDocumentModelAsync
 - ComposeDocumentModelAsync
 - CRUD

Deprecated: FormRecognizerClient, FormTrainingClient



Azure Form Recognizer Samples

v4.0.0. and v3.1



https://learn.microsoft.com/enus/samples/azure/azure-sdk-for-net/azureform-recognizer-client-sdk-samples



DEMO

Azure Forms Recognizer SDK



#Bulgaria

Summary

Azure Form Recognizer

- .NET
- Java
- JavaScript
- Python



Resources

Good links

https://github.com/OneBitSoftware/Azure-Form-Recognizer-Demo

https://aka.ms/formrecognizerstudio

https://aka.ms/formrecognizer/docs

https://github.com/azure/azure-sdk-for-

net/tree/main/sdk/formrecognizer/Azure.Al.FormRecognizer/samples





