What is Azure AI Document Intelligence?

Article • 11/22/2023

(i) Important

- Document Intelligence public preview releases provide early access to features that are in active development.
- Features, approaches, and processes may change, prior to General Availability (GA), based on user feedback.
- The public preview version of Document Intelligence client libraries default to REST API version 2023-10-31-preview.
- Public preview version 2023-10-31-preview is currently only available in the following Azure regions:
- East US
- West US2
- West Europe

This content applies to:

∨4.0 (preview) | Previous versions:

∨3.1 (GA)

∨3.0 (GA)

∨2.1 (GA)

① Note

Form Recognizer is now Azure Al Document Intelligence!

- As of July 2023, Azure Al services encompass all of what were previously known as Cognitive Services and Azure Applied Al Services.
- There are no changes to pricing.
- The names Cognitive Services and Azure Applied AI continue to be used in Azure billing, cost analysis, price list, and price APIs.
- There are no breaking changes to application programming interfaces (APIs) or SDKs.
- Some platforms are still awaiting the renaming update. All mention of Form Recognizer or Document Intelligence in our documentation refers to the same Azure service.

Azure Al Document Intelligence is a cloud-based Azure Al service that enables you to build intelligent document processing solutions. Massive amounts of data, spanning a wide variety of data types, are stored in forms and documents. Document Intelligence enables you to effectively manage the velocity at which data is collected and processed and is key to improved operations, informed data-driven decisions, and enlightened innovation.

✓ Document analysis models | ✓ Prebuilt models | ✓ Custom models |

Document analysis models

Document analysis models enable text extraction from forms and documents and return structured business-ready content ready for your organization's action, use, or progress.



Read | Extract printed and handwritten text.



Layout | Extract text and document structure.

Prebuilt models

Prebuilt models enable you to add intelligent document processing to your apps and flows without having to train and build your own models.



Invoice | Extract customer and vendor details.



Receipt | Extract sales transaction details.



Identity | Extract identification and verification details.



Health Insurance card | Extract health insurance details.



Contract | Extract agreement and party details.



US Tax W-2 form | Extract taxable compensation details.



US Tax 1098 form | Extract mortgage interest details.



US Tax 1098-E form | Extract student loan interest details.



US Tax 1098-T form | Extract qualified tuition details.



US Tax 1099 form | Extract information from variations of the 1099 form.

Custom models

- Custom models are trained using your labeled datasets to extract distinct data from forms and documents, specific to your use cases.
- Standalone custom models can be combined to create composed models.
- Extraction models
 - Custom extraction models are trained to extract labeled fields from documents.



Custom template | Extract data from static layouts.



Custom neural | Extract data from mixed-type documents.



Custom composed | Extract data using a collection of models.

- Classification model
 - Custom classifiers identify document types prior to invoking an extraction model.



Custom classifier | Identify designated document types (classes) prior to invoking an extraction model.

Add-on capabilities

Document Intelligence supports optional features that can be enabled and disabled depending on the document extraction scenario. The following add-on capabilities are available for 2023-07-31 (GA) and later releases:

- ocr.highResolution
- ocr.formula
- ocr.font
- ocr.barcode

Document Intelligence supports optional features that can be enabled and disabled depending on the document extraction scenario. The following add-on capabilities are available for 2023-10-31-preview and later releases:

queryFields

Analysis features

Model ID	Content Extraction	Paragraphs	Paragraph Roles	Selection Marks	Tables	Key- Value Pairs	Languages	Barcodes	Document Analysis	Formulas*	Style Font*	High Resolution [,]
prebuilt-read	√	✓					0	0		0	0	0
prebuilt-layout	√	✓	√	√	✓		0	0		0	0	0
prebuilt-idDocument	√						0	0	√	0	0	0
prebuilt-invoice	✓			✓	✓	0	0	0	√	0	0	0
prebuilt-receipt	✓						0	О	√	0	Ο	0
prebuilt- healthInsuranceCard.us	✓						0	0	✓	0	0	0
prebuilt-tax.us.w2	√			√			0	0	√	0	0	0
prebuilt-tax.us.1098	✓			√			0	0	√	0	0	0

Model ID	Content Extraction	Paragraphs	Paragraph Roles	Selection Marks	Tables	Key- Value Pairs	Languages	Barcodes	Document Analysis	Formu l as*	Style Font*	High Resolution [,]
prebuilt-tax.us.1098E	√			√			0	0	√	0	0	0
prebuilt-tax.us.1098T	√			√			0	0	√	0	0	0
prebuilt- tax.us.1099(Variations)	✓			√			0	0	√	0	0	0
prebuilt-contract	✓	✓	√	✓			O	0	√	0	0	0
{ customModelName }	✓	✓	√	√	✓		0	0	√	0	0	0
prebuilt-document (deprecated 2023-10-31-preview)	✓	✓	✓	✓	✓	✓	0	0		0	0	0
prebuilt-businessCard (deprecated 2023-10-31-preview)	✓								√			

- ✓ Enabled
- O Optional
- * Premium features incur extra costs

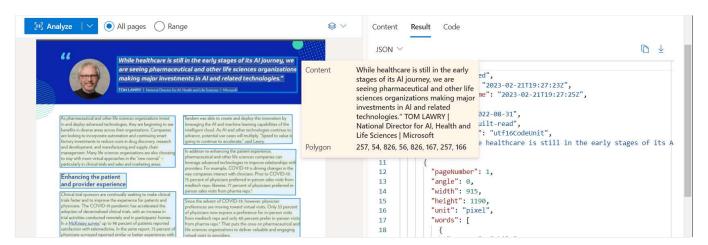
Models and development options

① Note

The following document understanding models and development options are supported by the Document Intelligence service v3.0.

You can use Document Intelligence to automate document processing in applications and workflows, enhance data-driven strategies, and enrich document search capabilities. Use the links in the table to learn more about each model and browse development options.

Read

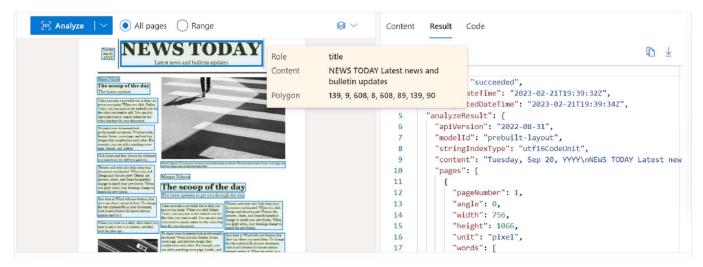


Model ID	Description	Automation use cases	Development options
prebuilt-read	• Extract text from documents.	• Contract processing.	Document Intelligence Studio
	 Data and field extraction 	 Financial or medical report processing. 	• REST API
			• C# SDK
			 Python SDK

Model ID	Description	Automation use cases	Development options
			• Java SDK
			JavaScript

Return to model types

Layout

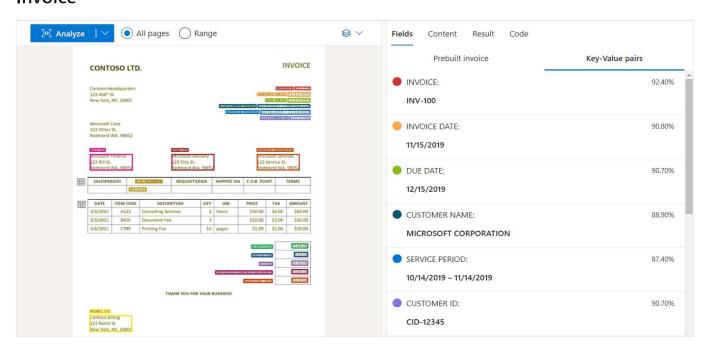


Expand table

Model ID	Description	Automation use cases	Development options
prebuilt-layout	 Extract text and layout information from documents. Data and field extraction Layout API is updated to a prebuilt model. 	 Document indexing and retrieval by structure. Preprocessing prior to OCR analysis. 	 Document Intelligence Studio REST API C# SDK Python SDK Java SDK
			• JavaScript

Return to model types

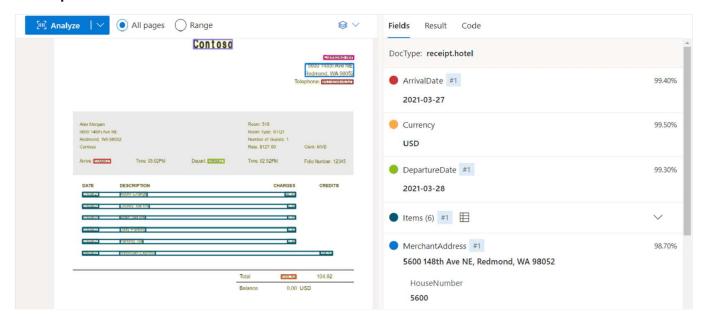
Invoice



Model ID	Description	Automation use cases	Development options
prebuilt-invoice	Extract key information from invoices.Data and field extraction	 Accounts payable processing. Automated tax recording and reporting. 	 Document Intelligence Studio REST API C# SDK Python SDK Java SDK
			 JavaScript

Return to model types

Receipt

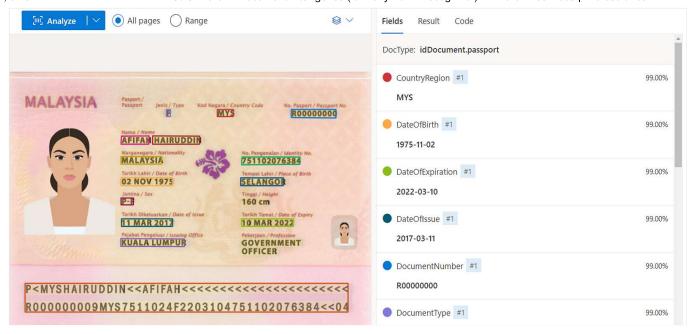


Expand table

Model ID	Description	Automation use cases	Development options
prebuilt-	• Extract key information from receipts.	• Expense management.	Document Intelligence
receipt	Data and field extraction	 Consumer behavior data analysis. 	Studio
	• Receipt model v3.0 supports processing of single-page hotel	 Customer loyalty program. 	• REST API
	receipts.	 Merchandise return processing. 	◆ C# SDK
		 Automated tax recording and 	Python SDK
		reporting.	• Java SDK
			JavaScript

Return to model types

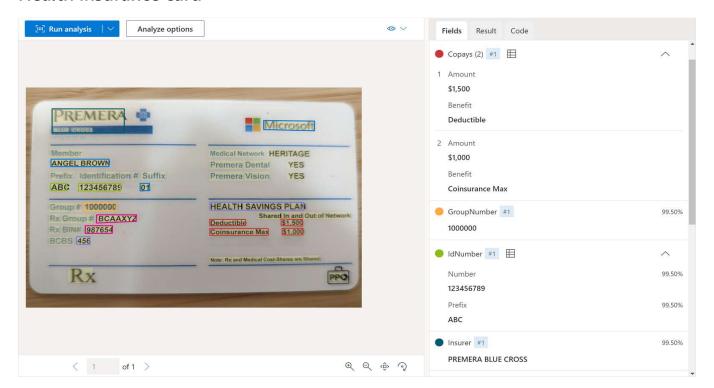
Identity (ID)



Model ID	Description	Automation use cases	Development options
prebuilt- idDocument	 Extract key information from passports and ID cards. Document types Extract endorsements, restrictions, and vehicle classifications from US driver's licenses. 	 Know your customer (KYC) financial services guidelines compliance. Medical account management. Identity checkpoints and gateways. Hotel registration. 	 Document Intelligence Studio REST API C# SDK Python SDK Java SDK JavaScript

Return to model types

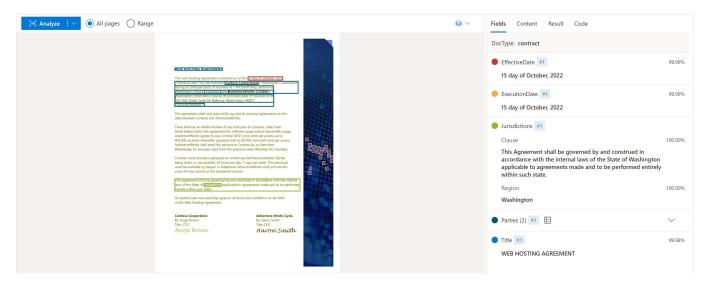
Health insurance card



Model ID	Description	Automation use cases	Development options
prebuilt-	• Extract key information from US health insurance	Coverage and eligibility	Document Intelligence
healthInsuranceCard.us	cards.	verification.	Studio
	 Data and field extraction 	 Predictive modeling. 	• REST API
		 Value-based analytics. 	• C# SDK
			Python SDK
			Java SDK
			 JavaScript

Return to model types

Contract model

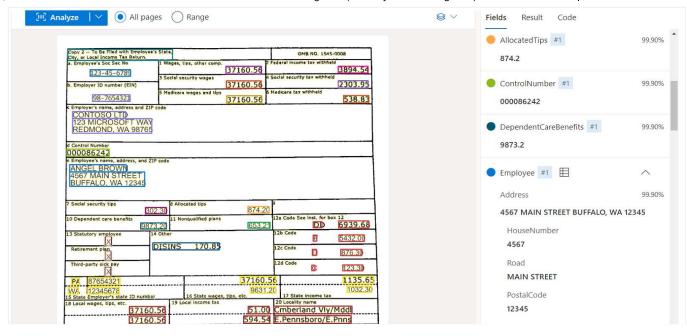


Expand table

Model ID	Description	Development options
prebuilt-contract	Extract contract agreement and party details.	Document Intelligence StudioREST API

Return to model types

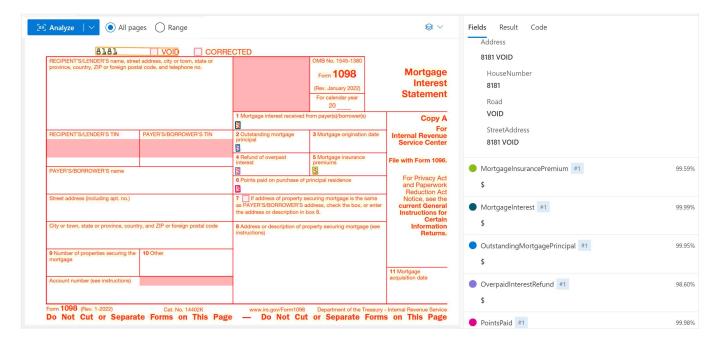
US Tax W-2 model



Model ID	Description	Automation use cases	Development options
prebuilt-tax.us.W-	• Extract key information from IRS US W2 tax forms (year	Automated tax document	Document Intelligence
2	2018-2021).	management.	Studio
	Data and field extraction	 Mortgage loan application 	• REST API
		processing.	• C# SDK
			Python SDK
			 Java SDK
			 JavaScript

Return to model types

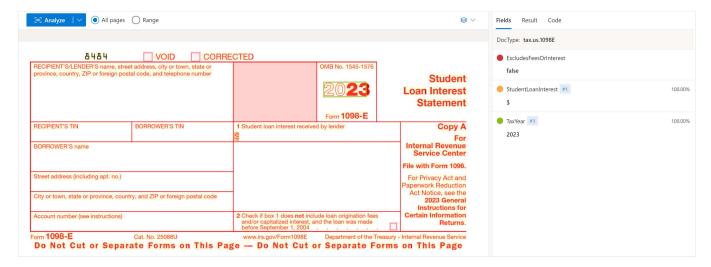
US tax 1098 form



Model ID	Description	Development options
prebuilt-tax.us.1098	Extract mortgage interest information and details.	Document Intelligence StudioREST API

Return to model types

US tax 1098-E form

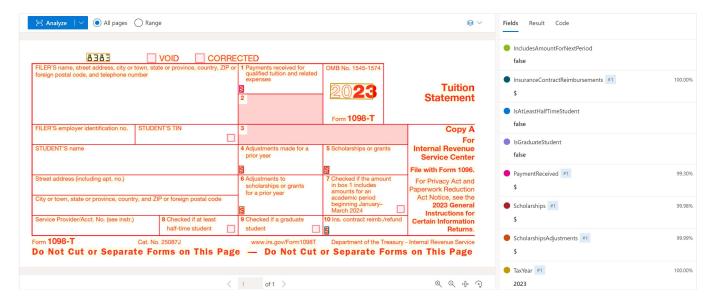


Expand table

Model ID	Description	Development options
prebuilt-tax.us.1098E	Extract student loan information and details.	Document Intelligence Studio REST API

Return to model types

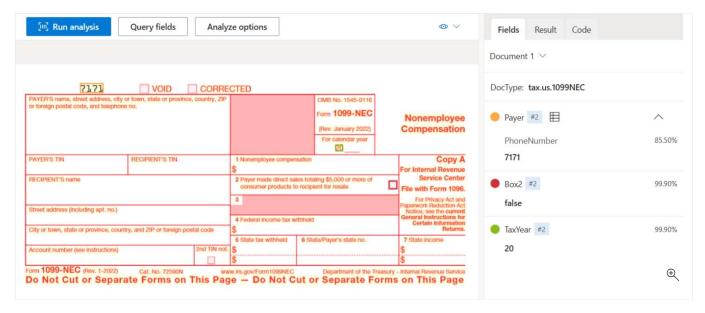
US tax 1098-T form



	elopment options
·	ocument Intelligence Studio EST API

Return to model types

US tax 1099 (and Variations) form

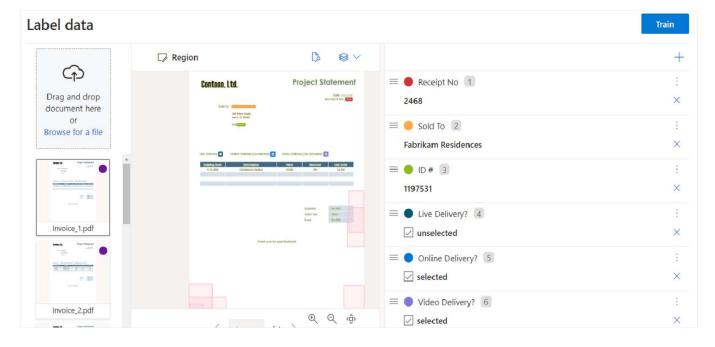


Expand table

Model ID	Description	Development options
prebuilt-tax.us.1099(Variations)	Extract information from 1099 form variations.	Document Intelligence StudioREST API

Return to model types

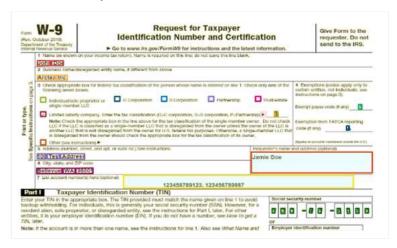
Custom model overview



About	Description	Automation use cases	Development options
Custom model	Extracts information from forms and documents into structured data based on a model created from a set of representative training document sets.	Extract distinct data from forms and documents specific to your business and use cases.	 Document Intelligence Studio REST API C# SDK Java SDK JavaScript SDK Python SDK

Return to custom model types

Custom template



① Note

To train a custom template model, set the buildMode property to template. For more information, see Training a template model

Expand table

About	Description	Automation use cases	Development options
Custom Template model	The custom template model extracts labeled values and fields from structured and semi-structured documents.	Extract key data from highly structured documents with defined visual templates or common visual layouts, forms.	 Document Intelligence Studio REST API C# SDK Python SDK Java SDK JavaSCript SDK

Return to custom model types

Custom neural

HOUSE RENTAL AGREEMENT

This House Rental Agreement ("Agreement," "rental agreement," or "lease") is entered into between Days (Landlord) and Samors into party Syrme into party Syrm

1. Landlord rents to Tenant, unfurnished, the premises on a month to month basis, terminable by either party at the end of any calendar month on at least 30 days notice to the other party. Tenant shall be entitled to possession of the premises and rent shall commence on April 20 2021 Tenant shall not assign, sublease, or allow anyone other than persons permitted under this lease to at any time be in possession of any portion of the premises. Landlord will provide five (5) keys to Tenant; each key fits all outside door locks. Landlord will also provide two keys to the garage, and one remote garage door opener. All keys and the remote door opener will be returned to Landlord at the end of the tenancy.

Tenant agrees to pay the stipulated monthly rent in advance on the first day of each
calendar month without offset or reduction. All rent is payable to Landlord at the address of
Landlord, D. Die terracia Road Sali and City Unit 64998 or at such other place as Landlord

① Note

To train a custom neural model, set the buildmode property to neural. For more information, see Training a neural model

Expand table

About	Description	Automation use cases	Development options
Custom	The custom neural model is used to extract labeled data from structured	Extract text data, checkboxes, and tabular	Document
Neural	(surveys, questionnaires), semi-structured (invoices, purchase orders), and	fields from structured and unstructured	Intelligence
model	unstructured documents (contracts, letters).	documents.	Studio
			 REST API
			• C# SDK
			 Java SDK
			 JavaScript SDK
			 Python SDK

Return to custom model types

Custom composed

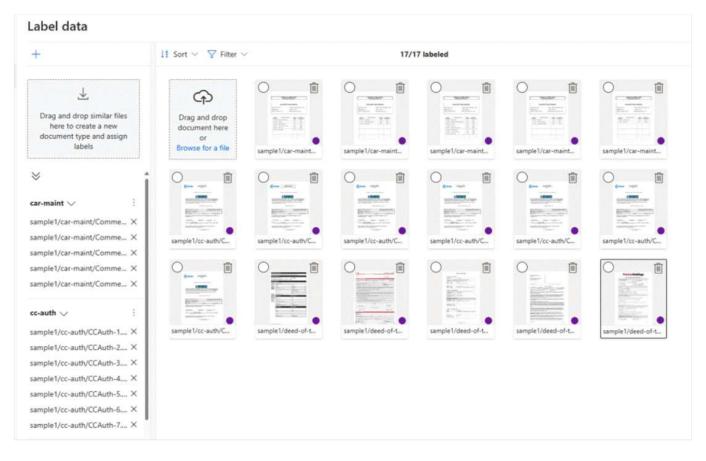


About	Description	Automation use cases	Development options
Composed custom models	A composed model is created by taking a collection of custom models and assigning them to a single model built from your form types.	Useful when you train several models and want to group them to analyze similar form types like purchase orders.	Document Intelligence StudioREST APIC# SDK

About	Description	Automation use cases	Development options
			• Java SDK
			JavaScript SDK
			Python SDK

Return to custom model types

Custom classification model



About	Description	Automation use cases	Development options
Composed classification model	Custom classification models combine layout and language features to detect, identify, and classify documents within an input file.	 A loan application packaged containing application form, payslip, and, bank statement. A collection of scanned invoices. 	DocumentIntelligence StudioREST API

Return to custom model types

:::moniker-end

Data privacy and security

As with all Al services, developers using the Document Intelligence service should be aware of Microsoft policies on customer data. See our Data, privacy, and security for Document Intelligence page.

Next steps

- Choose a Document Intelligence model
- Try processing your own forms and documents with the Document Intelligence Studio
- Complete a Document Intelligence quickstart and get started creating a document processing app in the development language of your choice.