

Language



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Natural Language Understanding

Natural Language Understanding

Create Language Service

The screenshot shows the Microsoft Azure portal interface for a deployment named "TextAnalyticsCreate-20250929171839". The "Overview" tab is selected. At the top, there is a search bar and several action buttons: Delete, Cancel, Redeploy, Download, and Refresh. Below the buttons, a message states "... Deployment is in progress". To the right of the message, deployment details are listed: Deployment name : TextAnalyticsCreate-20250929171839, Subscription : Azure subscription 1, and Resource group : gollnickdatasolutions. A "Deployment details" section is partially visible at the bottom.

Microsoft Azure

Home >

TextAnalyticsCreate-20250929171839 | Overview

Deployment

Search X << Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

Deployment is in progress

Deployment name : TextAnalyticsCreate-20250929171839

Subscription : Azure subscription 1

Resource group : gollnickdatasolutions

Deployment details



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Natural Language Understanding

Azure AI – Language Studio

Select an Azure resource

To access Language studio, you need an Azure resource. You can use an existing resource or create a new one. You can change the resource you use at any time. [Learn more about resources in Azure.](#)

Azure directory *

Note: Switching directory will cause the page to refresh.

Azure subscription *

Select an existing Azure subscription or [create a free account](#) and then refresh

Resource type *

Language or Azure Cognitive Services resources can be used for any capability except for translation, which requires a Translator resource

Resource name *

Select an existing resource or create a new one

Pricing tier: Standard (S)

Managed identity: Enabled

[Create a new Language resource](#)

Done

Cancel

Source: <https://language.cognitive.azure.com/>



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Natural Language Understanding

Create Language Project

Create a project

- Enter basic information
- Review and finish

Review and finish

Review the configurations you set for your project in the previous steps.

Azure resource

language20250929

Project name

bankingbot

Project type

Conversation

Description

N/A

Language

English (US)

Multiple languages

Disabled

Back

Create



Schema definition

Add intents and entities to your schema. Intents are tasks or actions the user wants to perform. Entities are terms relevant to t

Intents Entities

+ Add Delete

Intents ↑ ↓

Labeled utterances ↴ Entities used with this intent ↴

Check Account Balance 0

None 0

Transfer Money 0

View Recent Transaction 0

Schema definition

Add intents and entities to your schema. Intents are task

Intents Entities

+ Add Edit entity components Delete

Entities ↑ ↓

Account

Amount

Date

Source: <https://language.cognitive.azure.com/>



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Natural Language Understanding

Set up intents

Intent ▾ Utterance ▾

Write your example utterance and press enter

View Recent Transac... List my recent bank activities.

View Recent Transac... I'd like to check my transaction history.

View Recent Transac... What are my latest purchases?

View Recent Transac... Can I see my last 5 transactions?

Show me transactions on 26.09.
Date

Tagging

Source: <https://language.cognitive.azure.com/>

Natural Language Understanding

Start training

« Language Studio > Conversational Language Understanding projects > bankingbot - Training jobs X

Start a training job

Select Model
You can train a new model or overwrite an existing one. Training a new model is best at the beginning or for comparing between model performances. Overwriting a model will replace the old model with the new data.

You are currently using the latest 2022-09-01 training configuration version. [Click here to change](#).

Train a new model
BankBot
 Overwrite an existing model

Training mode
 Standard training (free)
Faster training times for quicker iterations. Only available in English. Free of charge.
 Advanced training
Trains using fine-tuned neural network transformer models. Can train multilingual projects. [View pricing](#).

Data splitting
We use separate datasets to train your model and test its accuracy. [Learn more about data splitting](#).

Automatically split the testing set from training data
We'll select stratified samples from all training data according to the percentages that you provide here. Any data already assigned to the testing set will be ignored completely.

80 % for training
20 % for testing

Use a manual split of training and testing data
We'll use the training and testing sets that you've assigned in [Data Labeling](#) to create your custom model and measure its performance.

Your current split of data
100% training 0% testing
[View distribution of data](#)

Train **Cancel**

Source: <https://language.cognitive.azure.com/>



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Natural Language Understanding

Model Performance

BankBot

[Overview](#) [Model Performance](#) [Test set details](#) [Dataset distribution](#) [Confusion matrix](#)

Model Type

Intents

Status: Trained successfully

F1 score: 100%
Precision: 100%
Recall: 100%

Finished training on: 9/29/2025, 5:40:01 PM
Total training time: 0 hour(s), 1 minute(s), 5 second(s)

Training data splitting type: Percentage
Number of training utterances: 12 (80%)
Number of testing utterances: 3 (20%)

F1 score:
100%

Precision:
100%

Recall:
100%

[Learn more about how to improve your model](#)

Guidance

To improve your model's performance, review these issues and follow any recommendations.

Not enough intents labels in training set

We recommend a minimum of 15 utterances per intent in your training data.

3 intents with low data.

[View Details](#)

Missing intents in test set.

When the testing data lacks labeled instances for an intents, the model's test performance may become less comprehensive due to untested scenarios.

1 missing intents.

[View Details](#)

Source: <https://language.cognitive.azure.com/>



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Natural Language Understanding

Model Deployment

Add deployment

X

Create or select an existing deployment name

You can create a new deployment name or overwrite an existing deployment name to add a trained model to them

Create a new deployment name

Production-Bot

Overwrite an existing deployment name

By selecting an existing deployment name, you will override any deployed model to this deployment name

Assign trained model to your deployment name

Add a trained model to your selected deployment name

Model

BankBot

Deployment regions

Select the regions to deploy in based on the available assigned resources.

Regions

Select all, East US - language20250929

Deploy

Cancel



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Natural Language Understanding

Test Deployment

Testing deployments

Test a deployment by providing a sample utterance to find out what intent and entities get recognized. These are the sa

 Run the test

Deployment name

Production-Bot

Enter your own text, or upload a text document

Can I check how much money i have in my account right now?

Result JSON

Intent

Top intent

Check Account Balance
Confidence: 92.66%

Entities

No entities predicted

Original text

Can I check how much money i have in my account right now?

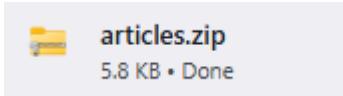


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Custom Text Classification

Custom Text Classification

Download Training Data



<http://aka.ms/classification-articles>

A screenshot of the Microsoft Azure portal's "Create new" blade. It lists several AI services: "Conversational language understanding", "Orchestration workflow", "Custom question answering", "Custom text classification" (which is highlighted with a red border), and "Custom named entity recognition".

- [Create new ▾](#)
- [Conversational language understanding](#)
Build natural language into apps, bots, and IoT devices.
- [Orchestration workflow](#)
Connect and orchestrate CLU, Custom question answering & LUIS project...
- [Custom question answering](#)
Customize the list of questions and answers extracted from your content ...
- [Custom text classification](#)
Train a classification model to classify text using your own data.
- [Custom named entity recognition](#)
Train an extraction model to identify your domain categories using your o...



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Custom Text Classification

Add Role to

Storage Account Contributor (1)				
<input type="checkbox"/>  bertgollnick-7160 f06b7b96-9e88-4332-bc8a-798ed59a284d	Managed identity	Storage Account Contributor	 This resource	None



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Custom Text Classification

Blob Access

Home > Storage center | Storage accounts (Blobs) >

 stbertgollni441857209840 ⚡ ⭐ ... Why can't this storage acco

Storage account

Search

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser

Storage Mover

Partner solutions

Resource visualizer

> Data storage

> Security + networking

Upload Open in Explorer Delete Move

Essentials

Resource group (move)	: rg-BertGollnickai
Location	: eastus
Subscription (move)	: Azure subscription 1
Subscription ID	: 9b8688c3-4700-497
Disk state	: Available
Tags (edit)	: Add tags

Properties Monitoring Capabilities (7) Recom

Blob service

Hierarchical namespace	Disabled
Default access tier	Hot
Blob anonymous access	Enabled



Custom Text Classification

Upload Articles

Home > Storage center | Storage accounts (Blobs) >

stbertgollni441857209840 Why can't this storage account be accessed Audit disaster recovery readiness for this storage account Perform a security check on this storage account

Storage account

Search

Upload Open in Explorer Delete Move Refresh Open in mobile CLI / PS Feedback

Overview

Essentials

Resource group (move) : rg-BertGollnickai Performance : Standard
Location : eastus Replication : Locally-redundant
Subscription (move) : Azure subscription 1 Account kind : StorageV2 (general)
Subscription ID : 9b8688c3-4700-4975-8bcf-8ad3a2248379 Provisioning state : Succeeded
Disk state : Available Created : 9/19/2025, 3:34:05
Tags (edit) : Add tags

Properties Monitoring Capabilities (7) Recommendations (1) Tutorials Tools + SDKs

Blob service

	Hierarchical namespace	Default access tier
blob1	Disabled	Hot
blob2	Enabled	
blob3	Disabled	
blob4	Disabled	
blob5	Disabled	
blob6	Disabled	
blob7	Disabled	

Security

	Require secure transfer for REST API operations	Storage account key access
blob1	Enabled	Enabled
blob2		
blob3		
blob4		
blob5		
blob6		
blob7		

Networking

	Public network access
blob1	Enabled
blob2	
blob3	
blob4	
blob5	
blob6	
blob7	

Upload blob

New container

Name : articles

Anonymous access level : Container (anonymous read access for containers and blobs)

All container and blob data can be read by anonymous request. Clients can enumerate blobs within the container by anonymous request, but cannot enumerate containers within the storage account.

Overwrite if files already exist

Ok Cancel

Advanced

Upload Give feedback



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Custom Text Classification

Create new Project

Create a project

- Connect storage
- Select project type
- Enter basic information
- Choose container
- Review and finish

Select project type

Select the type of custom text classification project that you would like to create. This project type cannot be changed later. [Learn more about classification types](#)

- Single label classification - each file will have only one label
For example, file 1 is classified as A and file 2 is classified as B



- Multi label classification - each file can have one or many labels
For example, file 1 is classified as A, B, and C and file 2 is classified as B and C



Back

Next

Cancel



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Custom Named Entity Recognition

Custom NER

Download Data

<http://aka.ms/entity-extraction-ads>

INITIAL	STATUS
 Ad 1.txt	
 Ad 2.txt	
 Ad 3.txt	
 Ad 4.txt	
 Ad 5.txt	
 Ad 6.txt	
 Ad 7.txt	
 Ad 8.txt	
 Ad 9.txt	
 Ad 10.txt	
 Ad 11.txt	
 Ad 12.txt	



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Custom NER

Storage Account

Home > Storage center | Storage accounts (Blobs) >

Create a storage account ...

Basics Advanced Networking Data protection Encryption Tags Review + create

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more about Azure storage accounts](#)

Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription * Resource group * [Create new](#)

Instance details

Storage account name *

Region * [Deploy to an Azure Extended Zone](#)

Preferred storage type

This helps us provide relevant guidance. It doesn't restrict your storage to this resource type. [Learn more](#)

Performance * Standard: Recommended for most scenarios (general-purpose v2 account)
 Premium: Recommended for scenarios that require low latency.

Redundancy *

Allow Blob anonymous access [?](#)

Disabled Enabled

Add role assignment ...

Role Members Conditions Review + assign

Selected role Storage Blob Data Contributor

Assign access to User, group, or service principal
 Managed identity

Members [+ Select members](#)

Name	Object ID	Type
Bert Gollnick	6de7d387-c382-4532-ab91-0703bbfec2...	User

Description

Optional

Custom NER

Storage Account

New container

X

Name *

classifyads



Anonymous access level ⓘ

Container (anonymous read access for containers and blobs) ▾



All container and blob data can be read by anonymous request. Clients can enumerate blobs within the container by anonymous request, but cannot enumerate containers within the storage account.

▼ Advanced

+ Add Directory ⚡ Upload |

classifyads

Authentication method: Access key

Add filter

Search blobs by prefix (case-se

Showing all 12 items

Name

Ad 1.txt

Ad 10.txt

Ad 11.txt

Ad 12.txt

Ad 2.txt

Ad 3.txt

Ad 4.txt

Ad 5.txt

Ad 6.txt

Ad 7.txt

Ad 8.txt

Ad 9.txt



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Custom NER

New Project – Data Labeling

Filter

Search for a file...

- Ad 1.txt
- Ad 10.txt
- Ad 11.txt
- Ad 12.txt
- Ad 2.txt
- Ad 3.txt
- Ad 4.txt
- Ad 5.txt
- Ad 6.txt
- Ad 7.txt
- Ad 8.txt
- Ad 9.txt

Data labeling ✓ Saved

Select a document to annotate its text with entity labels or [use Azure Machine Learning to label](#). After labeling the documents and adding them to a dataset, you'll be ready to create a model with this data in [Training jobs](#).

Single document view Document name: Ad 1.txt

1 face cord of firewood for sale
ItemForSale

Dry, seasoned hardwood ready to burn! Pickup only, located in the foothills of Denver, CO. Asking
Loca...

\$90
P...

Custom NER

Training

Language Studio > Custom Named Entity Recognition > nerclass - Training jobs

Training jobs

After labeling your data, start a training job to create a model that recognizes named entities. Select the trained model from a successful job to use it in your application.

 Start a training job  Cancel

Training job id	Status	Output model
4847006f-4941-4f41-95e9-7d334ba7b11...	Job in queue. Starting soon ...	ner



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Custom NER

Model Performance

ner

ⓘ Entities that are neither labeled nor predicted in the test set will not be part of the displayed results. [Learn more about data splitting.](#)

Overview

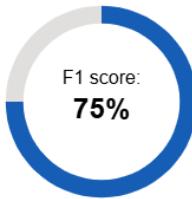
Entity type performance

Test set details

Dataset distribution

Confusion matrix

Status:  Trained successfully

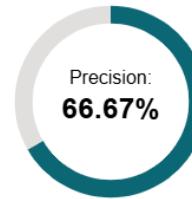


F1 score: ⓘ 75%
Precision: ⓘ 66.67%
Recall: ⓘ 85.71%

Finished training on: 9/29/2025, 7:20:22 PM
Total training time: 0 hour(s), 16 minute(s), 7 second(s)

Training data splitting type: Percentage
Number of training documents: 10 (83.33%)
Number of testing documents: 2 (16.67%)

[Learn more about how to improve your model](#)



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Custom NER

Model Testing

Enter your own text, or upload a text document

Bluetooth earbuds, \$100. These work okay, but sometimes disconnect from the phone. I'm sure someone more technical than me could figure it out.

Located in Sacramento, CA



Drag and drop .txt file(s) here
or
[Browse for a file](#)

[Result](#) [JSON](#)

ItemForSale

Entity value: Bluetooth
earbuds
Confidence: 93.00%

Price

Entity value: \$100
Confidence: 99.00%

Location

Entity value: Sacramento, CA
Confidence: 82.00%



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Translation

Translation

Create Translator



[Home](#) > [AI Foundry | Translator](#) >

Create Translator

[Basics](#) [Network](#) [Identity](#) [Tags](#) [Review + create](#)

Easily integrate real-time text translation capabilities into your application's websites, tools, or any solution requiring multi-language support such as website localization, e-commerce, customer support, messaging applications, internal communication, and more.

Project Details

Subscription * ⓘ

Azure subscription 1

Resource group * ⓘ

gollnickdatasolutions

[Create new](#)

Instance Details

! Please choose the Global region unless your business or application requires a specific region. Applications that do not offer a region selection use the Global region.

Region * ⓘ

East US

Name * ⓘ

mytranslator20250930

Pricing tier * ⓘ

Free F0 (Up to 2M characters translated per month)

[View full pricing details](#)



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Translation

Create Translator

Home > TextTranslationCreate-20250930081422 | Overview > mytranslator20250930

mytranslator20250930 | Keys and Endpoint

Translator

 Search



 Regenerate Key1  Regenerate Key2

 Overview

 Activity log

 Access control (IAM)

 Tags

 Diagnose and solve problems

 Resource visualizer

 Resource Management

 Keys and Endpoint

 Encryption

 Pricing tier

 Networking

 Identity

 Cost analysis

 Properties

 Security

 Monitoring

 Automation

 Help

 These keys are used to access your Azure AI Foundry API. Do not share your keys. Store them securely—for example, using Azure Key Vault. We also recommend regenerating these keys regularly. Only one key is necessary to make an API call. When regenerating the first key, you can use the second key for continued access to the service.

 Show Keys

KEY 1

..... 

KEY 2

..... 

Location/Region 

eastus 

 Web API  Virtual Network  Containers

 Use the below endpoints while using the Web API. To force the request to be handled by a specific geography, [see here](#).

Text Translation

<https://api.cognitive.microsofttranslator.com/> 

Document Translation

<https://mytranslator20250930.cognitiveservices.azure.com/> 



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Translation

Test Translator

Home > TextTranslationCreate-20250930081422 | Overview >

 mytranslator20250930 ... Best practices for managing AI resources How to use this Azure AI services with Python Show platform metrics for this AI resource

Overview

Resource group (move) : gollnickdatasolutions API Kind : TextTranslation
Status : Active Pricing tier : Free
Location : East US Endpoints : [Click here to view endpoints](#)
Subscription (move) : Azure subscription_1 Manage keys : [Click here to manage keys](#)
Subscription ID : b9b698c3-4700-4975-8bcf-8ad3a2248379
Tags : [Edit](#) [Add tags](#)

Try it Sample code Monitoring

Translate text to another language [Learn more about Translator](#)

! This demo runs against your resource and will incur usage against your account

× Translation failed. Please try again later.

From To

Auto detect Spanish

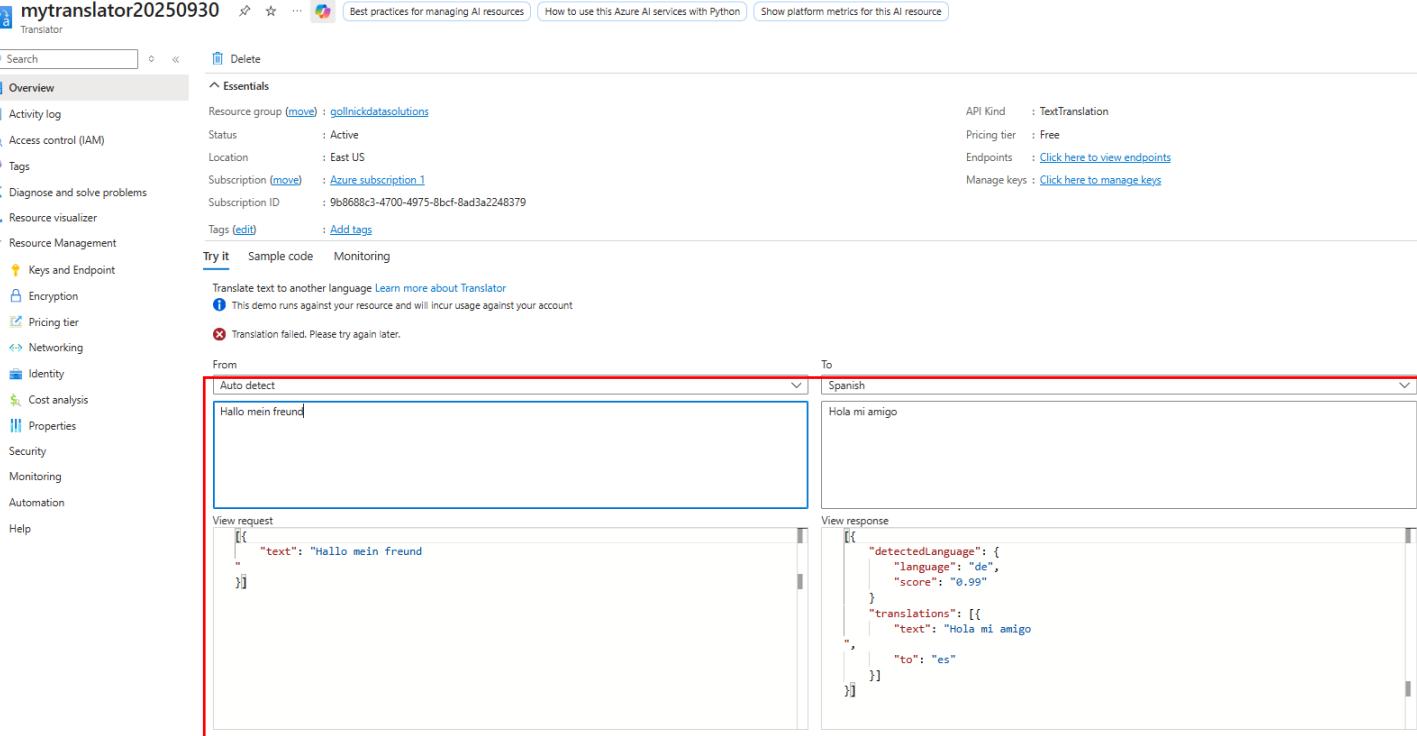
Hallo mein freund Hola mi amigo

View request

```
[{"text": "Hallo mein freund"}]
```

View response

```
[{"detectedLanguage": {"language": "de", "score": "0.99"}, "translations": [{"text": "Hola mi amigo", "to": "es"}]}]
```



Translation

Test Translators in Python

Develop scripts for

- Text translation: sample_translate.py
- Language Detection and translation: text-translation.py



Speech Recognition

Speech Recognition

Create speech service

Home > AI Foundry | Speech service >

Create Speech Services

...

Basics Network Identity Tags Review + create

Transcribe audible speech into readable, searchable text. Add real-time speech translations to your apps and services. Convert text to audio nearly in real time. Quickly build speech-enabled apps and services using the programming languages you already work with. Customize speech systems to optimize quality for specific scenarios.

[Learn more](#)

Project Details

Subscription * ⓘ

Azure subscription 1

Resource group * ⓘ

gollnickdatasolutions

[Create new](#)

Instance Details

Region ⓘ

East US

Name * ⓘ

myspeechservice20250930



Pricing tier * ⓘ

Free F0

[View full pricing details](#)



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Speech Recognition

Synthesize text and transcribe audio

Work through scripts for synthesizing text and transcribing audio

```
└── 07-speech
    ├── C-Sharp
    └── Python
        ├── speaking-clock
        │   ├── .env
        │   ├── speaking-clock.py
        │   ├── time.wav
        │   └── readme.txt
        └── time.wav
```



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Speech Recognition

Synthesize text and transcribe audio

