

# ITIS 6177 Final Project

## Translation API Documentation

**Name:** Rakesh Hebsur

**Student Id:** 801210899

### Overview

#### What is Translation API?

Translation API is an open-source API that internally uses [Microsoft Azure's Translator Cognitive Service](#).

This Translator can be used with any operating system to perform language translation.

#### Translator features

Feature	Description
Text Translation	Translate text between supported source and target languages.
Document Translation	Translate batch and complex files while preserving the structure and format of the original documents.

#### Language Support

The list below includes abbreviated languages and their full name. The languages must be specified in abbreviated form.

Language	Abbreviation
Afrikaans	af
Amharic	am
Arabic	ar
Assamese	as
Azerbaijani	az
Bashkir	ba
Bulgarian	bg
Bangla	bn
Tibetan	bo
Bosnian	bs
Catalan	ca
Czech	cs

Welsh	cy
Danish	da
German	de
Divehi	dv
Greek	el
English	en
Spanish	es
Estonian	et
Persian	fa
Finnish	fi
Filipino	fil
Fijian	fj
French	fr
French (Canada)	fr-CA
Irish	ga
Gujarati	gu
Hebrew	he
Hindi	hi
Croatian	hr
Haitian Creole	ht
Hungarian	hu
Armenian	hy
Indonesian	id
Icelandic	is
Italian	it
Inuktitut	iu
Japanese	ja
Georgian	ka
Kazakh	kk
Khmer	km
Kurdish (Northern)	kmr
Kannada	kn
Korean	ko
Kurdish (Central)	ku
Kyrgyz	ky
Lao	lo
Lithuanian	lt
Latvian	lv
Chinese (Literary)	lzh

Malagasy	mg
Māori	mi
Macedonian	mk
Malayalam	ml
Mongolian (Cyrillic)	mn-Cyrl
Mongolian (Traditional)	mn-Mong
Marathi	mr
Malay	ms
Maltese	mt
Hmong Daw	mww
Myanmar (Burmese)	my
Norwegian	nb
Nepali	ne
Dutch	nl
Odia	or
Querétaro Otomi	otq
Punjabi	pa
Polish	pl
Dari	prs
Pashto	ps
Portuguese (Brazil)	pt
Portugese (Portugal)	pt-PT
Romanian	ro
Russian	ru
Slovak	sk
Slovenian	sl
Samoan	sm
Albanian	sq
Serbian (Cyrillic)	sr-Cyrl
Serbian (Latin)	sr-Latn
Swedish	sv
Swahili	sw
Tamil	ta
Telugu	te
Thai	th
Tigrinya	ti
Turkmen	tk
Klingon (Latin)	tlh-Latin

Klingon (plqaD)	tlh-Piqd
Tongan	to
Turkish	tr
Tatar	tt
Tahitian	ty
Uyghur	ug
Ukrainian	uk
Urdu	ur
Uzbek (Latin)	uz
Vietnamese	vi
Yucatec Maya	yua
Cantonese (Traditional)	yue
Chinese Simplified	zh-Hans
Chinese Traditional	zh-Hant

## Text Translation API Functions

### Translate

The post request API used to translate text from source language to the target language(s).

Endpoint: <http://137.184.156.170:3000/translate>

Request Body:

- **from** (Optional): Source language to translate from. If no language is specified, the translator API identifies the language and translates it to the target language.
- **to** (Required): Target language to translate to.
- **text** (Required): Original text to translate.

Input:

Type: json

```
{
  "text": "Hello World!",
  "to": "de",
  "from": "en"
}
```

Response:

```
{
  "text": "Hallo Welt!",
  "to": "de"
}
```

## Output:

POST ⌵ http://137.184.156.170:3000/translate

Params ● Authorization Headers (8) **Body** ● Pre-request Script Tests Settings

● none ● form-data ● x-www-form-urlencoded ● raw ● binary ● GraphQL **JSON** ⌵

```
1 {
2   ... "text": "Hello World!",
3   ... "to": "de",
4   ... "from": "en"
5 }
6
```

Body Cookies Headers (8) Test Results 🌐 Status: 200 OK

Pretty Raw Preview Visualize **JSON** ⌵ ↺

```
1 {
2   "text": "Hallo Welt!",
3   "to": "de"
4 }
```

## Languages API

Get request API to retrieve all the languages available to translate.

Endpoint: <http://137.184.156.170:3000/translate/languages>

### Response:

Type: Json

```
{
  "af": {
    "name": "Afrikaans",
    "nativeName": "Afrikaans",
    "dir": "ltr"
  },
  "am": {
    "name": "Amharic",
    "nativeName": "አማርኛ",
    "dir": "ltr"
  },
  "ar": {
    "name": "Arabic",
    "nativeName": "العربية",
    "dir": "rtl"
  },
  ...
}
```

## Output:

GET http://137.184.156.170:3000/translate/languages

Params Authorization Headers (6) Body Pre-request Script Tests Settings

Query Params

KEY	VALUE	DESCRIPT
Key	Value	Descriptio

Body Cookies Headers (8) Test Results Status: 200 OK

Pretty Raw Preview Visualize JSON

```
1 {
2   "af": {
3     "name": "Afrikaans",
4     "nativeName": "Afrikaans",
5     "dir": "ltr"
6   },
7   "am": {
8     "name": "Amharic",
9     "nativeName": "አማርኛ",
10    "dir": "ltr"
11  },
12 }
```

## Detect API

Post request API to identify the source text language. The API returns the language that was detected as well as a score. The score might be between 0 and 1. The closer the score gets to 1.0, the more certain the detection is.

Endpoint: <http://137.184.156.170:3000/detect>

### Request Body:

- **text** (Required): Original text to be detected.

### Input:

```
{
  "text": "Ich würde wirklich gern Ihr Auto um den Block fahren ein paar Mal."
}
```

### Response:

```
[
  {
    "language": "de",
    "score": 1.0,
    "isTranslationSupported": true,
    "isTransliterationSupported": false
  }
]
```

## Output:

The screenshot shows a REST client interface. At the top, a POST request is configured to `http://137.184.156.170:3000/detect`. The 'Body' tab is selected, showing a JSON payload: `{ "text": "Hello World" }`. Below the request, the 'Test Results' tab shows a status of 200 OK. The response body is displayed in a 'Pretty' JSON format: 

```
{
  "language": "en",
  "score": 0,
  "isTranslationSupported": true,
  "isTransliterationSupported": false
}
```

## Document Translation API Functions

Document Translation API can be used to translate multiple documents across all supported languages while preserving original document structure and data format.

### Supported Document formats

File type	File extension
Adobe PDF	pdf
Comma-Separated Values	csv
HTML	html, htm
Localization Interchange File	xlf, xliiff
Markdown	markdown, mdown, mkdn, md, mkd, mdwn, mdtxt, mdtext, rmd
MHTML	mhtml, mht
Microsoft Excel	xls, xlsx
Microsoft Outlook	msg
Microsoft PowerPoint	ppt, pptx
Microsoft Word	doc, docx
OpenDocument Text	odt
OpenDocument Presentation	odp
OpenDocument Spreadsheet	ods
Rich Text Format	rtf
Tab Separated Values/TAB	tsv/tab
Text	txt

## Translate Document

The post request used for translating the text in the documents to the target language.

The translated documents are stored in the target location.

Note: Azure blob storage containers are used to store source and target files.

Endpoint: <http://137.184.156.170:3000/translatedocument>

Request Body:

- **language** (Required): Target language to translate to.

Input:

```
{
  "language": "es"
}
```

Response:

Type: JSON

```
{
  "statusText": "Accepted",
  "statusCode": 202
}
```

Output:

The screenshot displays a REST client interface. At the top, a dropdown menu is set to 'POST' and the URL 'http://137.184.156.170:3000/translatedocument' is entered. Below this, a series of tabs are visible: 'Params', 'Authorization', 'Headers (8)', 'Body', 'Pre-request Script', 'Tests', and 'Settings'. The 'Body' tab is selected and highlighted with an orange underline. Under the 'Body' tab, there are radio buttons for different content types: 'none', 'form-data', 'x-www-form-urlencoded', 'raw' (which is selected and highlighted with an orange circle), 'binary', 'GraphQL', and 'JSON' (which is highlighted in blue). Below the radio buttons, a text area contains the JSON request body: 

```
1 {
2   "language": "es"
3 }
```

At the bottom of the interface, there are tabs for 'Body', 'Cookies', 'Headers (8)', and 'Test Results'. The 'Body' tab is selected and highlighted with an orange underline. To the right of these tabs, a status indicator shows a globe icon followed by 'Status: 200 OK'. Below the tabs, there are buttons for 'Pretty', 'Raw', 'Preview', and 'Visualize'. The 'Pretty' button is selected and highlighted. To the right of these buttons is a dropdown menu set to 'JSON' and a button with a red icon. Below these buttons, a text area displays the pretty-printed JSON response: 

```
1 {
2   "statusText": "Accepted",
3   "statusCode": 202
4 }
```



The file created in the Azure target container after translation is shown below.

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home >

targetfiles Container

Search (Ctrl+/) << Upload Change access level Refresh Delete Change tier Acquire

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Permissions

Authentication method: Access key (Switch to Azure AD User Account)

Location: targetfiles

Search blobs by prefix (case-sensitive)

Add filter

Name	Modified	Access tier
ITIS6177SampleHelloFile.txt	5/1/2022, 6:44:03 PM	Hot (Inferred)

## Get File Formats

Get request to list all supported file formats. If successful, this method returns a 200 OK.

Endpoint: <http://137.184.156.170:3000/translateddocument/fileformats>

Response:

```
{
  "value": [
    {
      "format": "PlainText",
      "fileExtensions": [
        ".txt"
      ],
      "contentType": [
        "text/plain"
      ],
      "versions": []
    },
    {
      "format": "RichTextFormat",
      "fileExtensions": [
        ".rtf"
      ],
      "contentType": [
        "application/rtf"
      ],
      "versions": []
    }
  ],
  ...
}
```

Output:

GET

http://137.184.156.170:3000/translatedocument/fileformats

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

	KEY	VALUE	DESCRIPTION
<input type="checkbox"/>			
	Key	Value	Description

Body

Cookies

Headers (8)

Test Results

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "value": [
3     {
4       "format": "PlainText",
5       "fileExtensions": [
6         ".txt"
7       ],
8       "contentTypes": [
9         "text/plain"
10      ],
11      "versions": []
12    },
13    {
14      "format": "RichTextFormat",
15      "fileExtensions": [
16        ".rtf"
17      ],
18      "contentTypes": [
```

Cookies

Cad

Error codes

- 400035 - The source language is not valid. The "to" language entered must be within the list of supported languages.
- 400036 - Target language is not valid. The "from" language entered must be within the list of supported languages

Important links

- [GitHub code repository](#)
- [Readme file with instructions for installation](#)