AI & Machine Learning Products (https://cloud.google.com/products/machine-learning/)
Cloud Speech-to-Text (https://cloud.google.com/speech-to-text/)
Documentation (https://cloud.google.com/speech-to-text/docs/) Guides

Detecting language spoken automatically

Beta

This feature is in a pre-release state and might change or have limited support. For more information, see the
product launch stages (https://cloud.google.com/products/#product-launch-stages).

This page describes how to provide multiple language codes for audio transcription requests
sent to Speech-to-Text.

In some situations, you don't know for certain what language your audio recordings contain.
For example, if you publish your service, app, or product in a country with multiple official
languages, you can potentially receive audio input from users in a variety of languages. This
can make specifying a single language code for transcription requests significantly more
difficult.

Multiple language recognition

Speech-to-Text offers a way for you to specify a set of alternative languages that your audio
data might contain. When you send an audio transcription request to Speech-to-Text, you can
provide a list of additional languages that the audio data might include. If you include a list of
languages in your request, Speech-to-Text attempts to transcribe the audio based upon the
language that best fits the sample from the alternates you provide. Speech-to-Text then labels
the transcription results with the predicted language code.

This feature is ideal for apps that need to transcribe short statements like voice commands or
search. You can list up to three alternative languages from among those that Speech-to-Text
supports (https://cloud.google.com/speech-to-text/docs/languages) in addition to your primary
language (for four languages total).

Even though you can specify alternative languages for your speech transcription request, you
must still provide a primary language code in the `languageCode` field. Also, you should constrain
the number of languages you request to a bare minimum. The fewer alternative language

codes that you request helps Speech-to-Text more successfully select the correct one. Specifying just a single language produces the best results.

Enabling language recognition in audio transcription requests

To specify alternative languages in your audio transcription, you must set the `alternativeLanguageCodes` field to a list of language codes in the `RecognitionConfig` (https://cloud.google.com/speech-to-text/docs/reference/rest/v1p1beta1/RecognitionConfig) parameters for the request. Cloud Speech-to-Text supports alternative language codes for all speech recognition methods: `speech:recognize` (https://cloud.google.com/speech-to-text/docs/reference/rest/v1p1beta1/speech/recognize), `speech:longrunningrecognize` (https://cloud.google.com/speech-to-text/docs/reference/rest/v1p1beta1/speech/longrunningrecognize), and Streaming (https://cloud.google.com/speech-to-text/docs/reference/rpc/google.cloud.speech.v1p1beta1#google.cloud.speech.v1p1beta1.StreamingRecognizeRequest)
.

> **Note:** You can only use the alternative languages feature with the `default` or `command_and_search` models. For more information about how to specify different models, see the `RecognitionConfig` (https://cloud.google.com/speech-to-text/docs/reference/rest/v1p1beta1/RecognitionConfig) reference documentation.

PROTOCOL	JAVA	NODE.JS	PYTHON

Refer to the `speech:recognize` (https://cloud.google.com/speech-to-text/docs/reference/rest/v1p1beta1/speech/recognize) API endpoint for complete details.

To perform synchronous speech recognition, make a `POST` request and provide the appropriate request body. The following shows an example of a `POST` request using `curl`. The example uses the access token for a service account set up for the project using the Google Cloud Cloud SDK (https://cloud.google.com/sdk). For instructions on installing the Cloud SDK, setting up a project with a service account, and obtaining an access token, see the quickstart (https://cloud.google.com/speech-to-text/docs/quickstart-protocol).

The following example shows how to request transcription of an audio file that may include speech in English, French, or German.

```
curl -s -H "Content-Type: application/json" \
    -H "Authorization: Bearer $(gcloud auth application-default print-access-token)
    https://speech.googleapis.com/v1p1beta1/speech:recognize \
    --data '{
    "config": {
        "encoding":"LINEAR16",
        "languageCode": "en-US",
        "alternativeLanguageCodes": ["fr-FR", "de-DE"],
        "model": "command_and_search"
    },
    "audio": {
        "uri":"gs://cloud-samples-tests/speech/commercial_mono.wav"
    }
}' > multi-language.txt
```

If the request is successful, the server returns a `200 OK` HTTP status code and the response in JSON format, saved to a file named `multi-language.txt`.

```
{
  "results": [
    {
      "alternatives": [
        {
          "transcript": "hi I'd like to buy a Chromecast I'm ..."
          "confidence": 0.9466864
        }
      ],
      "languageCode": "en-us"
    },
    {
      "alternatives": [
        {
          "transcript": " let's go with the black one",
          "confidence": 0.9829583
        }
      ],
      "languageCode": "en-us"
    },
  ]
}
```

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