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

Quickstart: Using client libraries

This page shows you how to send a speech recognition request to Speech-to-Text in your favorite programming language using the Google Cloud Client Libraries.

Speech-to-Text enables easy integration of Google speech recognition technologies into developer applications. You can send audio data to the Speech-to-Text API, which then returns a text transcription of that audio file. For more information about the service, see Cloud Speech-to-Text basics (https://cloud.google.com/speech-to-text/docs/basics).

Before you begin

1. Sign in (https://accounts.google.com/Login) to your Google Account.

   If you don't already have one, sign up for a new account (https://accounts.google.com/SignUp).

2. Set up a Cloud Console project.

   SET UP A PROJECT

   Click to:
   - Create or select a project.
   - Enable the Cloud Speech-to-Text API for that project.
   - Create a service account.
   - Download a private key as JSON.

   You can view and manage these resources at any time in the Cloud Console (https://console.cloud.google.com/).

3. Set the environment variable *GOOGLE_APPLICATION_CREDENTIALS* to the file path of the JSON file that contains your service account key. This variable only applies to your current shell session, so if you open a new session, set the variable again.

   Example: Linux or macOS

   Replace *[PATH]* with the file path of the JSON file that contains your service account key.

   ```
   export GOOGLE_APPLICATION_CREDENTIALS="[PATH]"
   ```
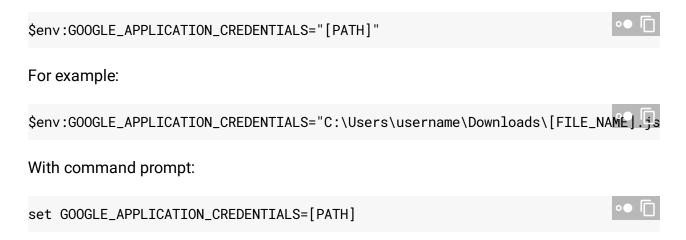
For example:

```
export GOOGLE_APPLICATION_CREDENTIALS="/home/user/Downloads/service-account-fil
```
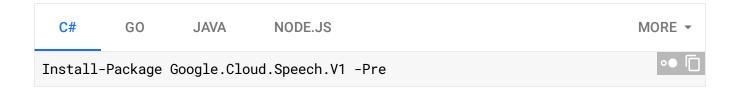
⌄   **Example:** Windows

Replace *[PATH]* with the file path of the JSON file that contains your service account key, and *[FILE_NAME]* with the filename.

With PowerShell:

```
$env:GOOGLE_APPLICATION_CREDENTIALS="[PATH]"
```

For example:

```
$env:GOOGLE_APPLICATION_CREDENTIALS="C:\Users\username\Downloads\[FILE_NAME].js
```

With command prompt:

```
set GOOGLE_APPLICATION_CREDENTIALS=[PATH]
```

4. Install and initialize the Cloud SDK (https://cloud.google.com/sdk/docs/).

Install the client library

C#	GO	JAVA	NODE.JS		MORE ▾

```
Install-Package Google.Cloud.Speech.V1 -Pre
```

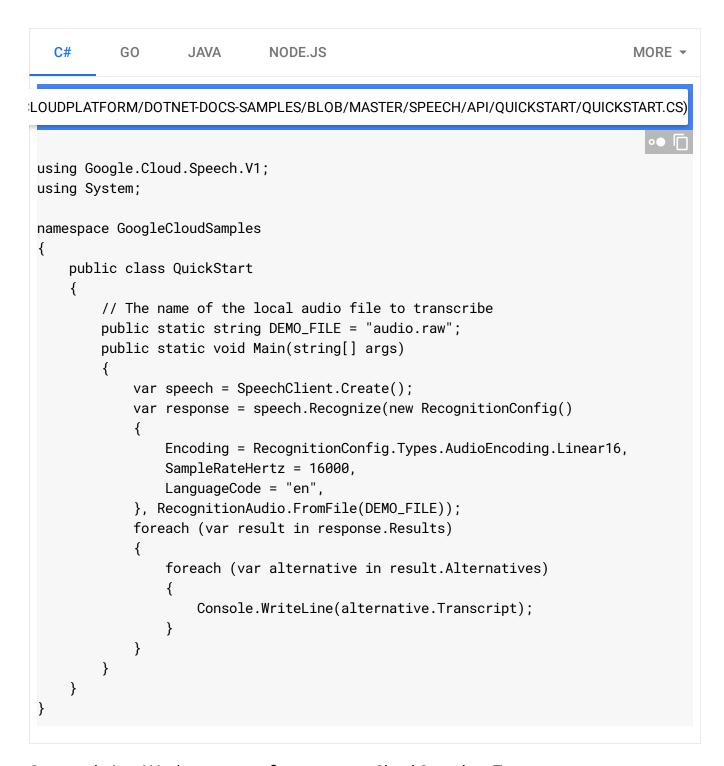## Make an audio transcription request

Now you can use Cloud Speech-to-Text to transcribe an audio file to text. Use the following code to send a **recognize**
 (https://cloud.google.com/speech-to-text/docs/reference/rest/v1/speech/recognize) request to the Speech-to-Text API.

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LOUDPLATFORM/DOTNET-DOCS-SAMPLES/BLOB/MASTER/SPEECH/API/QUICKSTART/QUICKSTART.CS)

```csharp
using Google.Cloud.Speech.V1;
using System;

namespace GoogleCloudSamples
{
    public class QuickStart
    {
        // The name of the local audio file to transcribe
        public static string DEMO_FILE = "audio.raw";
        public static void Main(string[] args)
        {
            var speech = SpeechClient.Create();
            var response = speech.Recognize(new RecognitionConfig()
            {
                Encoding = RecognitionConfig.Types.AudioEncoding.Linear16,
                SampleRateHertz = 16000,
                LanguageCode = "en",
            }, RecognitionAudio.FromFile(DEMO_FILE));
            foreach (var result in response.Results)
            {
                foreach (var alternative in result.Alternatives)
                {
                    Console.WriteLine(alternative.Transcript);
                }
            }
        }
    }
}
```

Congratulations! You've sent your first request to Cloud Speech-to-Text.

If you receive an error or an empty response from Cloud Speech-to-Text, take a look at the troubleshooting (https://cloud.google.com/speech-to-text/docs/troubleshooting) and error mitigation (https://cloud.google.com/speech-to-text/docs/error-messages) steps.

Clean up

To avoid incurring charges to your Google Cloud account for the resources used in this quickstart, follow these steps.

- Use the Cloud Console (https://console.cloud.google.com/) to delete your project if you do not need it.

What's next

- Practice transcribing short audio files (https://cloud.google.com/speech-to-text/docs/sync-recognize).

- Learn how to batch long audio files for speech recognition (https://cloud.google.com/speech-to-text/docs/async-recognize).

- Learn how to transcribe streaming audio (https://cloud.google.com/speech-to-text/docs/streaming-recognize) like from a microphone.

- Get started with the Cloud Speech-to-Text in your language of choice by using a Cloud Speech-to-Text client library (https://cloud.google.com/speech-to-text/docs/reference/libraries).

- Work through the sample applications (https://cloud.google.com/speech-to-text/docs/samples).

- For best performance, accuracy, and other tips, see the best practices (https://cloud.google.com/speech-to-text/docs/best-practices) documentation.