Speech Recognition

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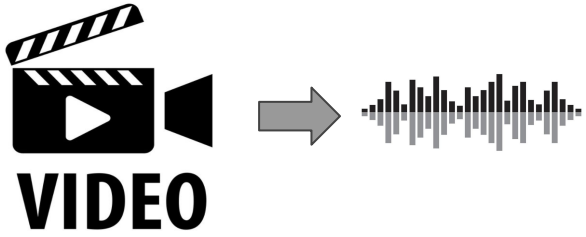
Use Cases

- Video subtitles
- Meeting transcription
- Voice assistants
- Dictation

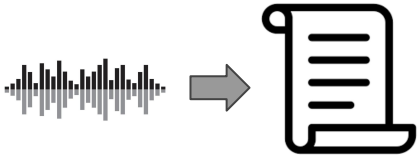
Document Conversion




```
#pip install SpeechRecognition moviepy
import moviepy.editor as mp

# Load video file
clip = mp.VideoFileClip(r"fold_in_the_cheese.mp4")

# Create .wav file
clip.audio.write_audiofile(r"fold_in_the_cheese.wav")
```



Several options

Amazon Transcribe

Speech-to-Text

Speech to Text

Best for **medical** transcription

Transcription Engine

Google Speech-to-text request types

Google Cloud

Request	Description	File length limit
Synchronous Recognition	API must return response before processing next request	~ 1 minute
Asynchronous Recognition	Request sent and API polled for result	Max 8 hours
Streaming Recognition	Real-time transcription	N/A

Speech-to-Text typically processes audio faster than realtime, processing 30 seconds of audio in 15 seconds on average.

Google Speech-to-text Setup

Download/set JSON path
(synch and asynch recognition)

Create storage bucket
(asynchronous recognition)

Speech Recognition Process

Google Cloud

Set up Account

- Create Storage
- Create Speech-to-text service

Prep File

- Convert file to meet requirements
- Upload file
- Set configs

Transcribe

- Call API
- Collect result
- Write to file
- Delete file from storage

Google Speech-to-text Requirements and Configurations

Google Cloud

Requirements

- Sample rate must be 16K Hz or greater
- .wav file must be single channel (mono)

Configurations

- Punctuation
- Speaker count if more than 1
- Specify model (ex. video, phone call)
- Word timestamps
- Alternatives
- More… in documentation

Fold in the Cheese

Google Cloud

speaker 1:

speaker 2: This is not your mother's recipe.

Yes, and now I'm passing it on to you. So try to keep

speaker 1: up. Oh next step is to fold in the

speaker 2: cheese. What does that mean? What does fold in the cheese mean?

He holds it in I understand that but how do you fold it? Do you fold it in half like a piece of paper and drop it in the pot or what do you do and I cannot show you everything.

Okay? Well, can you show me one thing

speaker 1: you just what you do? You just fold it in.

speaker 2: Okay. I don't know how to fold broken cheese like that.

I don't know how to be any clearer.

You take that thing that's in your head, huh?

And you if you say fooled in one more time.

I'm that's follows it in.

This is your recipe you fooled in the cheese, then don't you dare you fold it in David?

Google Cloud

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aws

This is not your mother's recipe.

Yes. And now I'm passing it on to you, so try to keep up.

Um oh. Next step is to fold in the cheese.

What does that mean? What does fold in the cheese mean? He holds it in.

I understand that. But how? How do you fold it? Do you fold it in half like a piece of paper and drop it in the pot? Or what do you do, David?

I cannot show you everything.

Okay, Well, can you show me one thing?

You just guess what you do? You just fold it in.

I don't know how to fold broken cheese like that, and I don't know how to be any clearer.

You take that thing that's in your head, huh?

If you say fold in one more time has folded in.

This is your recipe. You fold in the cheese then, don't you? You fooled it in David.

Simon Sinek

And the reason it's a wonderful hotel is not because of the fancy beds any hotel can go and buy a fancy bed.
The reason it's a wonderful hotel is because of the people who work there if you walk past somebody at the Four Seasons in this and they say hello to you.
You get the feeling that they actually wanted to say hello to you.
It's not that somebody told them that you have to say hello to all the customers say hello to all the guests, right?
You actually feel that they care now in their Lobby they have a coffee stand and I want afternoon I went.

Cedar Toolbox

speaker 1: Hey

speaker 2: has Paul Bunyan finished his

speaker 1: box who? I'm going to need some things for the chest like the number for a carpenter like a workbench in miter saw to Bar clamps and some towels. Okay?

speaker 2: Do you know how to use a miter saw

speaker 1: um, no might as well back and he's asked me to get these things for him. We're building the chest together. So Wow,

speaker 2: this whole thing just got a lot weirder. There's a tool shed out back the other side of the

speaker 1: motel. Okay, will you be requiring a toolbox? Maybe let's go with yes, just to be safe. Will you be needing your

speaker 2: basic toolbox or your Cedar Chest

speaker 1: toolbox? Obviously the Cedar Chest toolbox

speaker 2: that's in the shed in the show.

How to decide

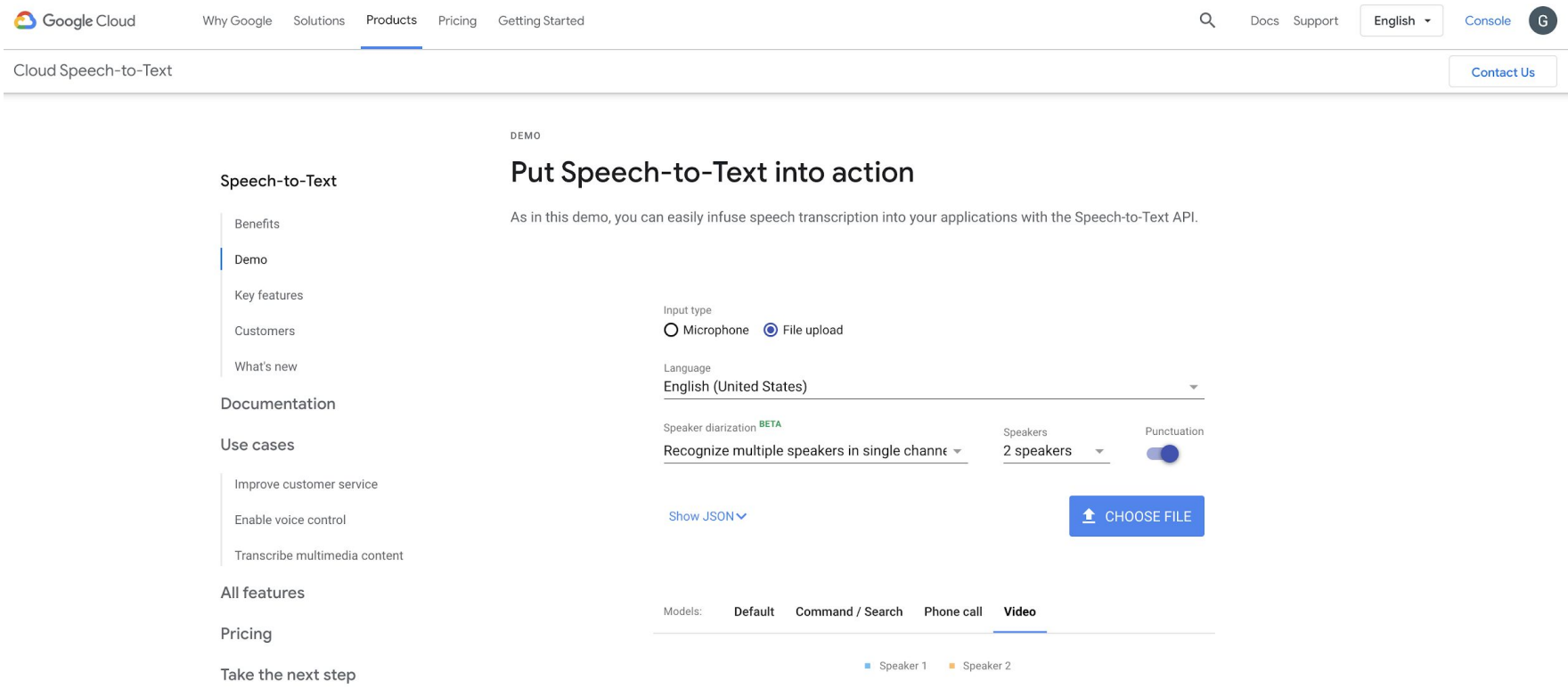
- Fast
- More languages

- Leader
- Known for accuracy
- Timestamps seem more granular

Just try it out!

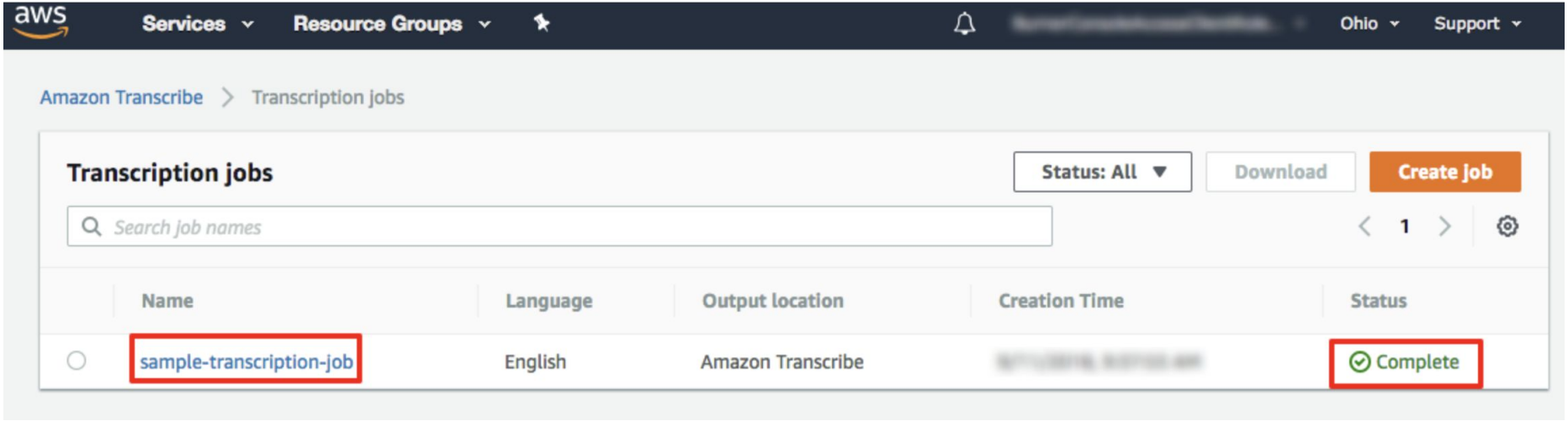
Google Cloud

https://cloud.google.com/speech-to-text



Just try it out!

https://aws.amazon.com/getting-started/hands-on/create-audio-transcript-transcribe/



Thanks!

Any questions?

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