

## MACHINE LEARNING APIs

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- DEFINITION OF AN API
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## WHAT IS AN API ?

API is the acronym for Application Programming Interface, which is a software intermediary that allows two applications to talk to each other. Each time you use an app like Facebook, send an instant message, or check the weather on your phone, you're using an API.

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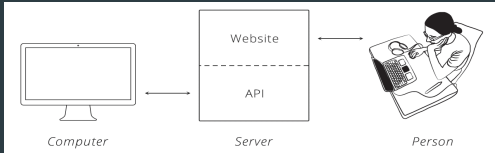
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### FUNCTIONALITY OF AN API



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### EXAMPLE OF AN API

When you use an application on your mobile phone, the application connects to the Internet and sends data to a server. The server then retrieves that data, interprets it, performs the necessary actions and sends it back to your phone. The application then interprets that data and presents you with the information you wanted in a readable way. This is what an API is - all of this happens via API.

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### WHAT IS MACHINE LEARNING?

- Machine learning is a process of learning from examples and experience.
- Applications of machine learning include Telecommunications, general game development, Computer Networks

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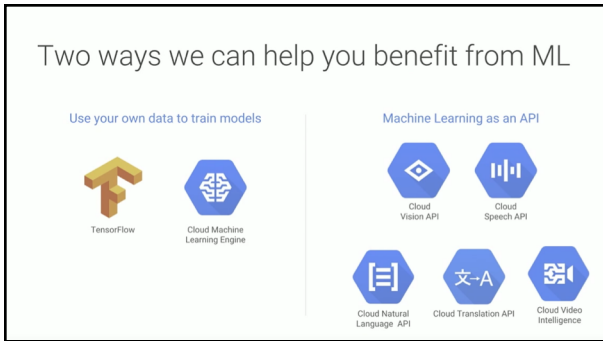
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**CLOUD VISION API**

Cloud Vision API enables developers to understand the content of an image by encapsulating powerful machine learning models in an easy-to-use REST API. It quickly classifies images into thousands of categories (such as, "sailboat"), detects individual objects and faces within images, and reads printed words contained within images. You can build metadata on your image catalog, moderate offensive content, or enable new marketing scenarios through image sentiment analysis.

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### FEATURES OF THE VISION API

- LABEL DETECTION
- FACE DETECTION
- OCR
- EXPLICIT CONTENT DETECTION
- LANDMARK DETECTION
- LOGO DETECTION

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### SPEECH API

Google Cloud Speech-to-Text enables developers to convert audio to text by applying powerful neural network models in an easy-to-use API. The API recognizes 120 languages and variants to support your global user base. You can enable voice command-and-control, transcribe audio from call centers, and more. It can process real-time streaming or prerecorded audio, using Google's machine learning technology.

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The screenshot shows the Google Cloud Speech-to-Text API configuration page. It includes options for input type (Microphone or File upload), language (English (United States)), speaker identification (Off), and punctuation (Off). The request URL is `https://speech.googleapis.com/v1beta1/speech:recognize`. The request body is a JSON object:

```
{  "audio": {    "content": "/s Your audio .fl"  },  "config": {    "enableAutomaticPunctuation": true,    "encoding": "LINEAR16",    "languageCode": "en-US",    "model": "default"  }}
```

At the bottom, there is a "START NOW" button.

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## REFERENCES

<https://cloud.google.com/vision/>  
<https://cloud.google.com/speech-to-text/>  
Google Cloud platform on youtube

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