Dec 3, 2015, 09:14am EST

# Google Cloud Vision API Delivers Sophisticated Image Recognition Service To Developers

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Cloud

*I cover Cloud Computing, Machine Learning, and Internet of Things*

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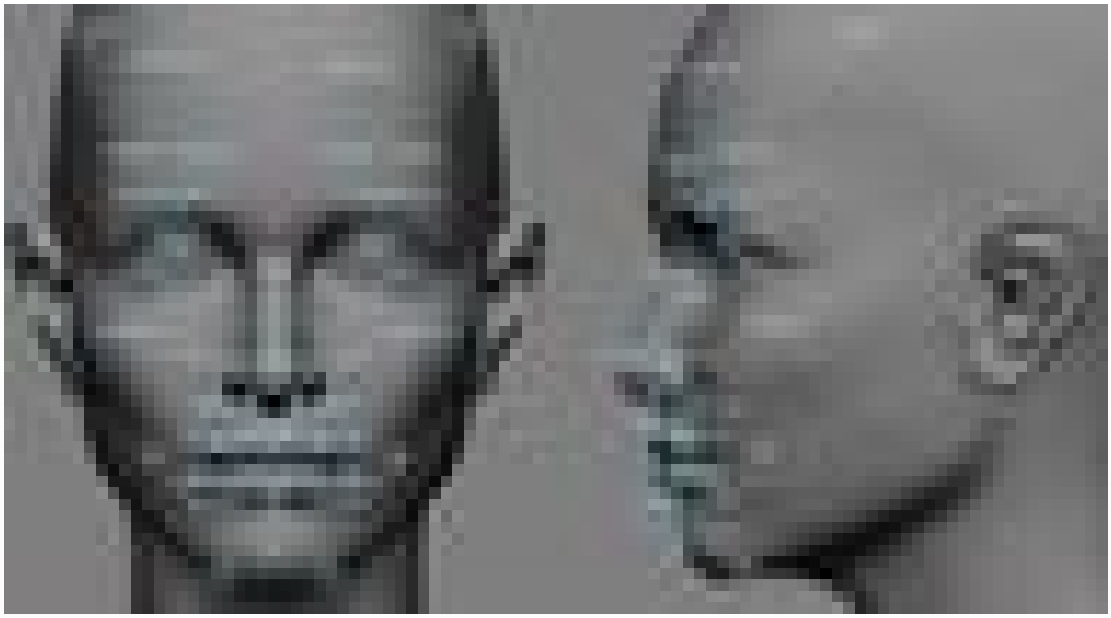
Google is exposing some of its internal projects to developers as cloud APIs. After giving away TensorFlow, a machine learning service, Google is now opening up access to the image recognition engine through the Cloud Vison API.

Google Photos is one of the products that heavily relies on the image classification and pattern matching algorithm. It's the technology that enables consumers to search for photos that contain a specific object or a landmark. With Cloud Vision API, developers can include the same sophisticated image recognition capability in their applications.



Exposed as REST API, Google Cloud Vision API accepts an image and classifies it into thousands of categories. It can detect faces with emotions and also recognize printed words from many languages. Developers can build rich metadata around the images that can be used to perform custom searches. The API can be used for image sentiment analysis, moderation of offensive content and image pattern matching.

According to Google, the following scenarios are possible with Cloud Vision API:

- **Label/Entity Detection** picks out the dominant entity (e.g., a car, a cat) within an image, from a broad set of object categories. You can use the API to easily build metadata on your image catalog, enabling new scenarios like image based searches or recommendations.
- **Optical Character Recognition** to retrieve text from an image. Cloud Vision API provides automatic language identification and supports a wide variety of languages.
- **Safe Search Detection** to detect inappropriate content within your image. Powered by Google SafeSearch, the feature enables you to easily moderate crowd-sourced content.

- **Facial Detection** can detect when a face appears in photos, along with associated facial features such as eye, nose and mouth placement, and a likelihood of over eight attributes like joy and sorrow. We don't support facial recognition, and we don't store facial detection information on any Google server.
- **Landmark Detection** to identify popular natural and manmade structures, along with the associated latitude and longitude of the landmark.
- **Logo Detection** to identify product logos within an image. Cloud Vision API returns the identified product brand logo, with the associated bounding polybox.

With the heavy lifting moving to the cloud, even low-powered devices can take advantage of these services through the APIs. Mobile developers can build advanced image search functionality in their applications. When combined with Internet of Things, this API will enable advanced scenarios such as a smart doorbell that can compare the visitors face with a pre-defined set of images.

Microsoft is offering its machine learning APIs to developers to build smart applications. For example, how-old.net website uses Azure Machine Learning to detect the age of the people seen in the photos. IBM Watson is another service that's available to developers.

Public cloud is forcing the platform vendors to differentiate themselves from the competition. In a bid to attract more developers, platform companies are exposing their secret sauce as APIs. Google's TensorFlow, Predictive Analysis API, and Kubernetes; Microsoft's Service Fabric; Amazon's CodeDeploy are some of the examples of internal services that made their way to the outside world. This is certainly a good thing for developers. What could have remained within the research labs of these companies is now available to them in the form of simple APIs.

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