



VISUA vs Google Cloud Vision

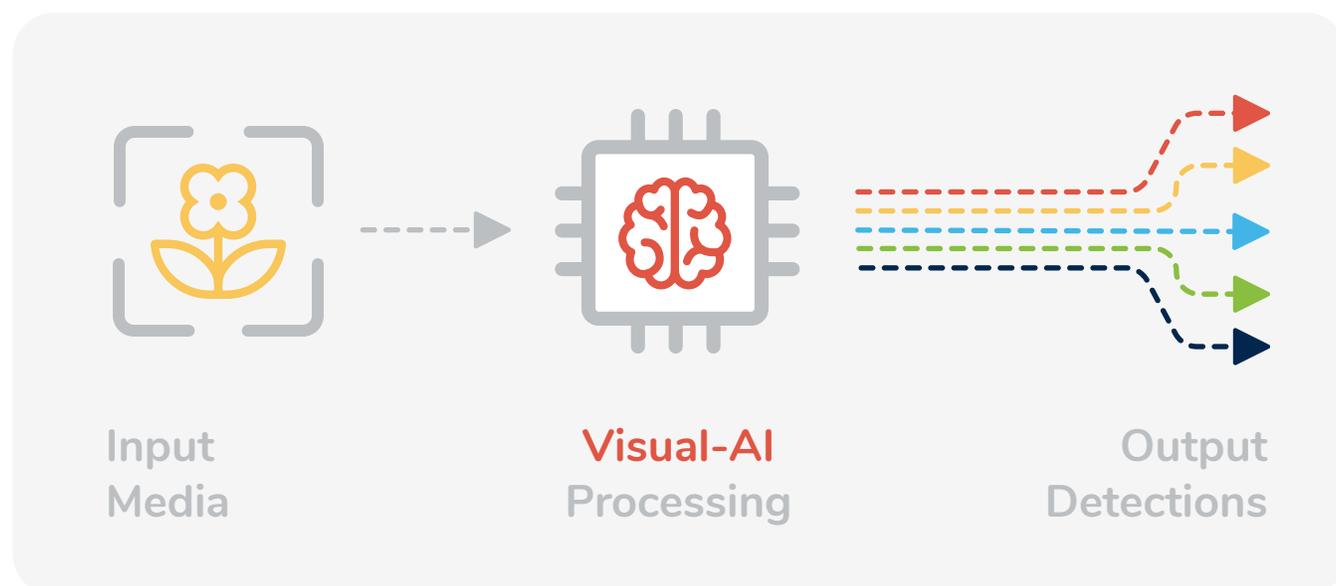
How does VISUA's Visual-AI/Computer Vision stack compare to Google's Cloud Vision API?

The Visual-AI People.

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With a number of Visual-AI applications and APIs available on the market, it can be difficult to know which ones will provide what you need. In this article, we will review the offerings from **Google** in the form of their **Cloud Vision** solution and another market-leading **Visual-AI** by **VISUA**.

Rather than taking a deep technical analysis of their comparable offerings, in terms of performance factors like *precision* and *recall* (which are better tested based on specific criteria and parameters of your specific project), we're going to provide a starting point in comparing the overall offering, analysing key points of interest to hopefully save you some time.





What is Google Cloud Vision?



Google Cloud Vision API was released in December 2015. It offers a broad range of computer vision technologies based on *pre-trained machine learning models* that provide functionality like assigning *labels to images* and quickly *classifying* them into various predefined categories. It can also *detect objects and faces*, read printed and *handwritten text* as well as build *metadata* in your image catalog. The API can also be applied to safe search, analysing images for potentially dangerous or offensive content as well as detecting celebrity faces and providing the ability for customers to image search on ecommerce sites. It is quite a comprehensive API.

What is VISUA?



VISUA launched in 2016 as LogoGrab, before rebranding to VISUA in 2020. They offer Visual-AI that powers the world's leading brand protection, authentication, cyber security, and monitoring platforms. VISUA delivers technologies such as *logo/mark detection*, *text detection*, *object & scene detection* and *visual search*. These technologies are used by world leading companies for various applications, including product authentication, phishing detection, brand monitoring, sponsorship monitoring and many more.

VISUA's offering is less a collection of APIs and more of a technology suite backed by consultancy to deliver the precise results to meet a given application.

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Features & Offerings Detail

Most Visual-AI APIs enable similar features with some variances depending on the markets they lean towards. Both **VISUA** and **Google Cloud Vision** enable *Object Detection*, *Optical Character Recognition (OCR)*, *Logo Detection*, the ability to moderate content and much more while there are areas which neither support, such as *Face Comparison* and *Face Search*. **VISUA** allows for custom image classification and detection where **Google Cloud Vision** doesn't, while the **Vision API** enables *Sentiment Detection* and *Facial Recognition*, features which **VISUA** has chosen not to provide.

Feature	Google Cloud Vision	VISUA
Logo Detection	✓	✓
Add Logos/Marks To Library	✗	✓
Instant Logo Learning	✗	✓
Logo Library Size	Fixed	Unlimited
Object Detection	✓	✓
Scene Detection	✓	✓
Custom Object Detection	✓	✓
Visual Search	✓	✓
Image Classification (Predefined)	✓	✓
Image Classification (Custom)	(Available with AutoML) ✗	✓
Text Detection (Print)	✓	✓
Text Detection (Handwriting)	✓	✓

Continued...



Feature	Google Cloud Vision	VISUA
Face Detection	✓	✗
Sentiment Detection (face)	✓	✗
Face Comparison	✗	✗
Face Search	✗	✗
Image Processing/Analysis	✓	✓
Video Processing/Analysis	✗	✓
Real-time processing	✗	✓
Project Implementation Support	By Third-Parties	By VISUA
Custom projects/applications support	By Third-Parties	By VISUA
Deployment In The Cloud	✓	✓
Deployment On-Premise	✗	✓
Deployment On-Device	✗	✓
Batched Media Processing	✓	✓
Batched Task Processing	✗	✓
Freely Accessible API for Testing	✓	✗
Usage Model	Credits	Contract

VISUA VS Google Cloud Vision API: Data Processing

In order to make an informed decision about which API to use, it's important to understand how each service ingests and processes data. Here, we will take a close look at the types of data that can be input.

Speed



Speed is often a key factor when it comes to deciding upon any API that involves an element of data processing. The speed and simplicity of **VISUA's** training data has been a key differentiating factor when it came to some customers analysing which API was the right one for their needs.

Real-time Processing

LIVE

Real-time processing is especially important in many applications, such as broadcast or sponsorship monitoring, among others. **Google's Vision API** does not at the time of writing provide real-time processing meaning that it may provide limitations for some users.

VISUA, however, does support real-time processing, enabling their clients to provide platform users with the ability to process, monitor and analyse image and video live.

Batched Media & Task Processing Support



Occasional computer vision users typically look for Batch Processing support when choosing an API. This allows them to process multiple images or videos at once meaning they they do not lead a large infrastructure established for less frequent usage, for example, running quarterly or yearly reports. Both **Google Cloud Vision** and **VISUA** support batched media processing.

Batched Task Processing allows multiple tasks to be combined into a single request. Often, API users will want to do more than just, say, logo detection or text detection on an image or video. In many cases they will want to identify brands, detect objects, identify the scene/context of the image/video and convert embedded text to machine readable text. This can therefore all, (or any combination of the tasks), be requested in a single API call. **Google Cloud Vision** does not support batched task processing while **VISUA's** Visual-AI does.

Media Formats



Both **Google's Cloud Vision API** and **VISUA** accept most raster image file formats (e.g. *.png, .jpg, .gif, .tif*) but **Google Cloud Vision** will not support vector files (e.g. *.ai, .eps, .pdf, .svg*). **VISUA** will accept SVG file types, and they can also offer custom pre-processing for other vectors formats as well *PDF* and webpage formats. With Google you need to rasterize the images yourself before attempting to upload. Both platforms are capable of analysing images of all quality levels, however, the lower the resolution, the less accurate the analysis will be. **VISUA's** offering stands out here as it is highly customisable, and can be 'tuned', for each use case, which will typically drive much higher accuracy/performance in these edge cases.

Both **Google Vision Cloud** and **VISUA** support video, enabling their technology to support a number of businesses involved in broadcast monitoring or sports sponsorship monitoring, among others.

Deployment



This is an area of key difference between these two solutions. **Google Cloud Vision** provides deployment in the cloud only using their *API* framework.

VISUA, on the other hand, provides four deployment options that they terms as *Deploy-Anywhere*:

In the Cloud

VISUA's *Object Library* (reference logos and media) is stored in the cloud, with detections initiated through a simple *API*

On-Premise

VISUA installs relevant parts of their *Visual-AI* stack onto in-house infrastructure. This means all reference media is kept in local storage and detections are processed on the local hardware.

On-Device

VISUA's *On-Device* deployment allows user to store reference files and conduct detections on user-approved devices in the field without any requirement for wireless connectivity.

Hybrid

A combination of the above where a client might want to run some aspects of their implementation on-premise and others in the cloud, or a combination of cloud and on-device.

The benefits with **VISUA's** *Deploy-Anywhere* architecture is that clients can fit the *Visual-AI* part of the project around their specific needs. Key of these may be where a client has very strict commercial or regulatory requirements around privacy or security, which means that some data must never leave their domain. Another is where operators in the field work in and out of wireless coverage, so they want to use cloud where possible with a fallback to on-device only where necessary.



Developments and improvements

VISUA is a market-led business that responds to demands from its target industries and as a result, they continue to add new features and potential use-cases on a regular basis. As well as introducing new services, **VISUA** is continually refining its offering as their team of engineers work to improve upon existing features. That's not to say that **Google Cloud Vision** isn't also often updated; in 2020 they released 10 updates and feature amendments, but nothing completely new. When you consider the product portfolio under Google's belt, it may be fair to say that **Google Cloud Vision** is not one of their top priorities, while **VISUA's** sole purpose is to ensure their customers are getting the best and most up-to-date services.

Implementation and Support

As with all **Google** products, the APIs are available for testing and use up to a certain limit, thereafter usage is based on the purchasing of credits. Google has some standard resources and developer guides, but does not provide active project implementation, so to implement anything beyond the standard will require a third-party partner. When it comes to aftercare and support, according to the **Google Support** pages, you are expected to either seek advice using Stack Overflow or an especially created Slack Channel where you can discuss issues with fellow users. Alternatively, you can pay an additional fee for varied levels of support for example, you can pay \$100 extra per month per user for technical and high-impact issue support.

On the other hand, **VISUA** is committed to a consultative approach with clients from outset. The team will assist with implementation and integration with your existing system, even tweaking algorithms and models where required to deliver the most optimised solution for project and cost efficiency. **VISUA** understands that as companies grow and change, the technology needs to be flexible and scalable to keep up, so the same team is available to help with adaptations.

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Because of this very hands-on approach **VISUA** does not provide its API only for testing, but does provide a supported live data test wherever required.

Conclusion

While appropriate for many industries, because its visual search application is its strongest element, **Google's Cloud Vision API** seems best suited for large Ecommerce sites with enormous product catalogs where a user might want to search for an item based on a picture they found online. This is most likely because this use case feeds back into the company's primary product: its search engine.

VISUA's focus, however, is much more evenly distributed, meaning it can be scaled and customised to suit almost any given use case, from *Phishing Detection* to *Product Authentication*, and *Social Listening* to *Sponsorship Monitoring*.

While Google offers a wide range of resources and some online support, **VISUA's** team works closely with clients, from onboarding to setup, and continues to do so throughout the project's lifecycle. In other words, **VISUA's** approach is one of partnership with its clients, whereas the relationship is simply customer-provider when it comes to Google Cloud Vision.

So, if you're looking for standardised, pre-trained machine learning models for a relatively simple application, or you have internal expertise, then Google Cloud Vision may be a good choice. If on the other hand, your project is more complex or bespoke in nature, or you are looking for a hands-on provider with a more partner-like relationship, or indeed you are looking for requirements such as on-premise or on-device deployment, then **VISUA** is the way to go!

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Test Today

Whichever API you think might be a good, be sure to test all available solutions. Ultimately, the best solution is the one that gives the best/most accurate results in your application. To run a test of these technologies, fill in the form below and a VISUA team member will contact you, then hop over to Google Cloud Vision page to test out their API directly.

sales@visua.com

Or find out more at [VISUA.COM](https://visua.com)

Disclaimer:

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