

## **VISUA vs Amazon Rekognition**

How does VISUA's Visual-Al/Computer Vision stack compare to Amazon Rekognition API?



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We understand that choosing a computer vision application or API to work with can be a daunting task. There are countless options available and it can be tough to know which ones will provide everything your platform or business requires. In this article, we will compare the offerings from Amazon's computer vision platform, Amazon Rekognition, and another market-leading provider of Visual-AI solutions, VISUA.

While there is a place for a deep technical breakdown of services like these, the most useful analysis is often one that compares the overall offering, analysing the important points of interest to save you some research time. That's exactly what we'll do here.





#### What is Amazon Rekognition?

**Amazon Rekognition** is a cloud-based SaaS Computer Vision platform, launched in 2016. It provides a number of Computer Vision capabilities under two categories:

- **1.** Algorithms that are trained on data collected by Amazon or its partners.
- **2.** Algorithms that a user can train on a custom dataset.

Some examples of uses that can be employed using Rekognition include celebrity recognition, facial attribute detection, people pathing on video, text detection and unsafe visual content detection. Amazon focused predominantly on people and scene analysis in images and videos. As well as a number of private organizations, Rekognition counts the US Government among the users of its technology offerings.





#### What is VISUA?

Under the name LogoGrab, VISUA launched the same year as Amazon Rekognition as a start up in Dublin, Ireland. The company underwent a rebranding process in 2020.

VISUA offers powerful Visual-AI that is incorporated by some of the world's leading brand protection, authentication and monitoring companies, and cyber security businesses.

Similar to Rekognition, VISUA's algorithms are trained by data previously collected and users' own datasets can also be used to train new models.

The technology can be used for social listening, sponsorship monitoring, holographic authentication and phishing detection to name just a few. The offering is not just an API, it is a technology suite supported by a team of experts to deliver a precise solution for partners. It can analyse images and videos for brands and other graphics, objects, scenes, text, and general visual search..

Early on, VISUA took the decision not to incorporate any technologies that would personally identify individuals in visual media, although it can detect the presence of people in general.



## **Comparative Features & Offerings At-A-Glance**

Feature	Amazon Rekognition	VISUA
Logo Detection	V	v
Add Logos/Marks To Library	×	4
Instant Logo Learning	×	<ul> <li>✓</li> </ul>
Logo Library Size	N/A	Unlimited
Object Detection	V	<ul> <li></li> </ul>
Scene Detection	×	<ul> <li>✓</li> </ul>
Custom Object Detection	<ul> <li>✓</li> </ul>	v
Visual Search	×	v
Image Classification (Predefined)	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Image Classification (Custom)	<ul> <li>✓</li> </ul>	v
Text Detection (Print)	×	<ul> <li>✓</li> </ul>
Text Detection (Handwriting)	V	<ul> <li>✓</li> </ul>
Content Moderation	<ul> <li>✓</li> </ul>	v
PPE Detection	×	<ul> <li>✓</li> </ul>
Face Detection	V	×
Sentiment Detection (face)	v	×
Face Comparison	<ul> <li>✓</li> </ul>	×
Face Search	<ul> <li>✓</li> </ul>	×

Continued >



Feature	Amazon Rekognition	VISUA
Image Processing/Analysis	V	<ul> <li>✓</li> </ul>
Video Processing/Analysis	v	V
Real-Time Processing	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Project Implementation Support	By Third-Parties	By VISUA
Custom Projects/Applications Support	By Third-Parties	<b>By VISUA</b>
Deployment In The Cloud	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Deployment On-Premise	×	4
Deployment On-Device	×	4
Batched Media Processing	v	v
Batched Task Processing	V	v
Freely Accessible API for Testing	V	×
Usage Model	Credits	Contract



## Features & Offerings Detail

As highlighted in another recent comparison of **Google Cloud Vision vs VISUA**, most Visual-Al APIs enable very similar offerings with some differences depending on the markets they lean towards the most.

VISUA offers logo detection, object and scene detection, text detection and visual search. This makes it an excellent tool for integrating into platforms and products across many sectors, such as brand protection and monitoring and cybersecurity. While VISUA's offering provides visual search and logo detection with instant logo learning, Amazon's Rekognition does not. However, Rekognition does allow new logos to be trained through its custom labels feature. If you are looking to train a series of logos, this is likely to involve significant work, involving many humanhours of work and introducing significant lag. This makes VISUA the best choice for agility and responsiveness in use cases such as brand monitoring.

Amazon Rekognition has productised content moderation and PPE detection. While VISUA does not specifically mention this as a use case, their object and scene technology, as well as text detection, also allow for these functionalities. With this in mind, it may be fair to say that both providers can adapt to many, or perhaps even any use case but there is one difference: with Amazon Rekognition your team will need to train the system or enlist the services of a third party to do so, while VISUA will work with you to develop a solution that suits your needs.

On the other hand, **facial recognition** is enabled by Amazon's computer vision solution, while that's not something VISUA focuses on at this time. Rekognition's key focus in Facial Recognition, an offering that is almost unique to them, allows for celebrity recognition, facial similarity detection and people tracking. This particular ability would be especially useful to very specific business types, while others would see it as a data and privacy concern.



## VISUA vs Amazon Rekognition: Data Processing

Before you make a decision about which API to use, it's important to know how each service processes data. Let's take a look at some points of note:

#### Speed

Both VISUA and Amazon Rekognition boast speedy turnaround times in their data processing of all media types.

It has been noted, however, that many VISUA customers have found the speed and simplicity of VISUA's instant data training has been a key deciding factor for them when testing different API providers.

#### **Real-time Processing**

LIVE

Real-time processing is an important requirement for many use cases such as broadcast or sponsorship monitoring. This is something both providers enable, with Amazon particularly pushing this feature in their marketing and documentation. It would seem that the greatest effort by Amazon's team has been placed within the Video element, along with facial recognition.

The ability to process live video is an absolutely non-negotiable requirement for many businesses looking for a computer vision provider, so both VISUA and Rekognition will be high up on these businesses' list.



#### Batched Media & Task Processing Support



If your business requires the ability to batch process images or video with an API, we have good news: both Rekognition and VISUA have this ability.

Batch processing allows users to process multiple images and videos in a single API call, significantly simplifying the workflow, so this feature would be of incredible benefit to them.

Batch Task Process allows multiple tasks to be combined into a single request. For example an API user might want to identify brands, detect objects, identify the context of the image or video and convert embedded text into machine readable text. As far as Amazon's own documentation describes, it would seem multiple task processing is only available when using Amazon Rekognition's facial recognition offering whereby a face can be labelled along with the scenery around it. VISUA offers batch task processing on their full API offering.

#### **Media Formats**

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VISUA accepts most raster image file formats (e.g. .png, .jpg, .gif, .tif) but while Rekognition will only support png and jpg. VISUA will accept SVG file types, and they can also offer custom pre-processing for other vector formats as well as PDF and web page formats. With Amazon 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 higher the impact on accuracy. VISUA's offering stands out here due to its customizability. This would typically drive much higher accuracy in some cases.

Both APIs support video in all file formats. This means businesses with an interest in broadcast and sports sponsorship monitoring can get accurate and fast results. This seems to be the area Amazon pushes most in the documentation that supports their APIs, with very little information available on image library management. VISUA gives equal emphasis and importance to both video and image monitoring.



#### Deployment



The deployment of the APIs is a key difference between the two APIs. Amazon Rekognition is a cloud-based API only, while VISUA provides four deployment options.

This "**Deploy-Anywhere**" approach means it is much more accessible and adaptable to a broader range of businesses and use cases.

The four deployment options are as follows:

#### In the Cloud

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

## On-Premise

VISUA installs relevant parts of their Visual-Al 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 users to store reference files and conduct detections on user-approved devices in the field without any requirement for wireless connectivity.

## Hybrid 0+

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.

This structure means that clients can select the Visual-AI aspect of their project to fit specific needs. An example might be in a situation where a client has very strict privacy and security requirements and as such cannot use third party servers. With the ability to host on-premise, they can keep all necessary data local without fear of breaching internal regulations. This is not something that can be achieved with a cloud-only offering.



## **Developments and improvements**

VISUA is a market-led business that responds to the changing needs of their target industries. Consequently, they consistently add new features and potential use-cases, always refining their offering as their team of engineers work to improve upon the existing product. In 2021, VISUA introduced their deploy-anywhere capabilities, as well as adding the ability to support phishing detection.

Amazon also often **updates their API**, however while it certainly improves the offering, the updates aren't as vast as VISUA's most recent ones have been. Their only update in 2021 so far has been the ability to support tagging. However, both companies are consistently adding new features, regardless of how big or small.

It is fair to say that for Amazon, computer vision is just one of many facets to their business, whereas for VISUA, the delivery of market-leading Visual-AI is their sole focus.

## **Implementation and Support**

Amazon Rekognition's API is available to use for free on the AWS Free Tier for 12 months with limited metadata storage and image and video analysis credits. Implementation of the API rests wholly with the client's team unless they hire a third-party to do so. There is ample documentation to assist those tasked with implementing the API, however if you require developer, business or enterprise support you will need to pay an additional cost for an AWS support package.

On the other hand, VISUA has a consultative approach to implementation and support. A dedicated team is there to support you in deciding exactly how Visual-AI can meet your business needs, and they work directly with your team on setup and implementation. VISUA's team also provides ongoing support and consultation, ensuring that the API is scaling with your business. You'll receive



a much more personalized and personable experience with it feeling as though the VISUA developers and engineers are part of your team, rather than simply an API provider.

## Conclusion

Both Amazon Rekognition and VISUA have a strong place in the computer vision market. When considering all the information detailed above, it is clear to see that the users' needs and situation would determine which provider is the best choice.

Amazon Rekognition prides itself on it's facial recognition capabilities and there is no doubt that if you require this, this API is the one for you. It might be best suited to media outlets who specialize in reporting on key celebrity sightings or organizations which need to track specific identities for security purposes. Outside of that, they offer a series of AWS support packages starting from around \$2000 extra per month. If you don't have a specialised team in-house to implement and manage the API you can also opt to work with a third party agency.

VISUA is the one to go for if you are looking for best-in-class Visual-AI to enhance your existing brand monitoring, cybersecurity, brand protection or product authentication platform, or if you are a business interested in copyright and trademark protection. This API will particularly suit businesses that are not interested in hiring a Visual-AI team or in paying for the services of a second company for the implementation of one service. With VISUA, you'll get hands-on support from the team that established and continually work the API, all included in the agreed price on your contract. In modern business it can be hard to build trust and support with your vendors - often you can't speak to the same person about your project each time you have a query, and that's if you can speak to another person at all. There is huge value today in being able to rely on your vendor support teams and trust that they understand the nature of your work; that is something VISUA can confidently promise.

## **Test Today**

Whichever API you think might be a good fit, be sure to test all available solutions before you make a final decision. Ultimately, the best solution is the one that gives the best and 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. To test Amazon you will need to create an AWS account and set up the AWS CLI and SDK API before getting started with the Amazon Rekognition Console. Visit their website for more on this.

## sales@visua.com

#### Or find out more at VISUA.COM

#### Disclaimer:

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