Amazon Kendra

What is Amazon Kendra?

Enterprise search service powered by ML. It allows developers to add search capabilities to their applications so their end users can discover information stored within data from manuals, research reports, FAQs, human resources (HR) documentation, and customer service guides, which may be found across various systems such as

- S3
- SharePoint
- Salesforce
- ServiceNow
- RDS databases (no DynamoDB)
- Microsoft OneDrive, Google Drive
- Etc.

How does Amazon Kendra work with other AWS services?

Native connectors to popular AWS repository types such as S3 ,RDS databases.

Other AI services pre-process documents, generate searchable text, extract entities, such as

- Amazon Comprehend
- Amazon Transcribe
- Amazon Comprehend Medical

How do I get up and running with Amazon Kendra?

two easy ways:

(1) use the visual UI editor in our Experience Builder (no code required), or
(2) implement the Amazon Kendra API using a few lines of code for more-precise control.

What file types does Amazon Kendra support?

Amazon Kendra supports unstructured and semi-structured data in **.html, MS Office (.doc, .ppt), PDF, and text formats**.

With the MediaSearch solution, you can also use Amazon Kendra to search audio and video files.

Can I add custom connectors? using the Amzon Kendra Custom Data Source API

Can Amazon Kendra find answers from the content of audio and video recordings?

Yes, MediaSearch solution combines Amazon Kendra with Amazon Transcribe and enables users to search for relevant answers embedded in audio and video content.

Amazon Macie

Q: What and why Amazon Macie?

A: Macie uses machine learning and pattern matching to

- discover sensitive data.
- automatically detects sensitive data types, including PII
- Constant visibility of your data stored in S3.

Q: How much does Macie cost?

A: With Macie, you are charged based on three dimensions:

- # of S3 buckets evaluated for bucket inventory and monitoring
- # of S3 objects monitored for automated data discovery
- quantity of data inspected for automated and targeted sensitive data discovery.

Q: Is Macie a regional or global service?

A: Macie is a regional service. Macie must be enabled on a region-by-region basis and helps you view findings across all your accounts within each Region. This verifies that all data analyzed is regionally based and doesn't cross AWS regional boundaries.

Q: How does Macie support custom data types?

A: With Macie, you can add custom-defined data types using regular expressions ..

Q: Can I exclude buckets sampled by automated data discovery?

A: Yes..

Amazon Textract

Q: What is Amazon Textract?

Amazon Textract is a document analysis service that detects and extracts

- printed text, handwriting, structured data (such as fields of interest and their values)
- tables from images and scans of documents.

Amazon Textract's machine learning models have been trained on millions of documents so that virtually any document type you upload is automatically recognized and processed for text extraction.

Q: What are the most common use cases for Amazon Textract?

The most common use cases for Amazon Textract include:

- Importing documents and forms into business applications
- Creating smart search indexes
- Building automated document processing workflows
- Maintaining compliance in document archives
- Extracting text for Natural Language Processing (NLP)
- Extracting text for document classification

Q: What type of text can Amazon Textract detect and extract?

Amazon Textract can detect

- printed text and handwriting (in English, German, French, Spanish, Italian and Portuguese)
- ASCII symbols.
- also extracts explicitly labeled data, implied data, and line items from an itemized list of goods or services from almost any invoice or receipt in English

Q: What document formats does Amazon Textract support?

Amazon Textract currently supports PNG, JPEG, TIFF, and PDF formats.

Q: What APIs does Amazon Textract offer?

- **Detect Document Text API**: OCR and key-value pair detection
- **Analyze Document API** : Detect printed text, handwriting, fields, values, their relationships, tables, and other entities within a document along with their associated confidence scores.
- **Analyze Expense API** : Use normalized key names and column headers when extracting data from invoices and receipts so that downstream applications can easily compare output from many documents.
- **Analyze ID API** understands the context of identity documents such as U.S. passports and driver's licenses without the need for templates or configuration. Using Analyze ID, businesses providing ID verification services and those in finance, healthcare, and

insurance can easily automate account creation, appointment scheduling, employment applications, and more by allowing customers to submit a picture or scan of their identity document.

Amazon Fraud Detector

Q. What is Amazon Fraud Detector?

Amazon Fraud Detector is a fully managed service that makes it easy to identify potentially fraudulent online activities such as online payment fraud and fake account creation. Amazon Fraud Detector uses ML and 20 years of fraud detection expertise from AWS and Amazon.com to automatically identify potential fraudulent activity in milliseconds. Works as pay-as-you-go.

Q. How does Amazon Fraud Detector work?

- First, you define the event you want to assess for fraud.
- Next, you upload your historical event dataset to S3 and select a fraud detection model type, which specifies a combination of features and algorithms optimized to detect a specific form of fraud.
- The service then automatically trains, tests, and deploys a customized fraud detection model based on your unique information.
- After this framework is created, you can integrate the Amazon Fraud Detector API into you website's transactional functions, such as account sign-up or order checkout. Amazon Fraud Detector will process these activities in real time and provide fraud predictions in milliseconds to help you adjust your end-user experience.

Q. How do I setup fraud detection rules using Amazon Fraud Detector?

Amazon Fraud Detector makes it possible to perform rule-based fraud predictions with or without ML. With Amazon Fraud Detector, you can author detection rules (e.g. "IF model_score < 50 & credit_card_country = US THEN approve_order") using a simple rule-writing language. You can also specify the order in which rules trigger during an evaluation using an intuitive interface.

Amazon Transcribe

Features

- **Get Insights from Customer Conversations**
    - With Transcribe Call Analytics, you can quickly extract actionable insights from customer conversations.
    - AWS Contact Center Intelligence solutions and
    - Contact Lens for Amazon Connect offer turnkey solutions to improve customer engagement, increase agent productivity, and surface quality management alerts to supervisors.
- **Search and Analyze Media Content**

Better serve your patients and insurers by extracting important patient data from health intake forms, insurance claims, and pre-authorization forms.

- **Create Subtitles and Meeting Notes**

Subtitle your on-demand and broadcast content to increase accessibility and improve customer experience. Use Amazon Transcribe to boost productivity and accurately capture the meetings and conversations that matter to you.

- **Improve Clinical Documentation**

Medical doctors and practitioners can use Amazon Transcribe Medical to quickly and efficiently document clinical conversations into electronic health record (EHR) systems for analysis. The service is HIPAA- eligible and trained to understand medical terminology.

Amazon Translate

General

What is Amazon Translate?

Amazon Translate is a Neural Machine Translation (MT) service for translating text between supported languages. Powered by deep learning methods, the service provides high-quality, affordable, and customizable language translation, enabling developers to translate company and user-authored content, or build applications requiring support across multiple languages. The service can be used via an API, enabling either real-time or batch translation of text from the source language to the target language.

What languages are covered?

Amazon Translate supports translation between the following 75 languages…

Why should I use Amazon Translate?

You should use Amazon Translate because it enables you to reach more customers, communicate with them more effectively, and decrease your TCO. Many businesses have large volumes of content, user or company authored; the only way to make all of it accessible in multiple languages in a timely manner is to use Machine Translation. Because Amazon Translate costs a fraction of the cost of human translation (0.05% at $15/1M characters for Amazon Translate vs $30K for human translation on average), businesses can now afford to translate content they could not before.

For Language Service Providers (LSP) and value-added resellers, Amazon Translate supports business growth and expansion. With Amazon Translate, LSPs can increase productivity by as much as 50% and produce larger volumes of translation, freeing professional translators to focus on high-end creative content. Amazon Translate also allows you to customize your translation output using Active Custom Translation, as LSPs, you protect your IP when you use ACT provide customized translation. Translation Resellers can broaden their service portfolio without building new infrastructure or hiring staff.

What are the most common use cases for Amazon Translate?

Amazon Translate is a great solution in cases where the volume of content is high, speed is critical, and a certain level of translation imperfection (usually minor) is acceptable. For example, if you need to extract insights from large volumes of text in many languages, enable customers to search your application in their language of choice, make user-authored content such as forums and support content accessible in languages other than the source, get the gist out of responses to questionnaires and surveys, or publish a first draft – you can use Amazon Translate's raw output.

With light human post-editing, Amazon Translate can be applied to enabling customer service agents to support anyone, and translating company authored information such as specifications, comparisons of alternatives, FAQs, and support content. With more extensive post-editing, you can also use Amazon Translate to translate high-value, branded content, such as advertising and marketing materials, contracts, etc.

Does the service provide automatic source language detection?

Amazon Translate takes plain text input and language flags to indicate the language of the source text and desired target. If the source language is unknown, Amazon Translate will identify the source language using Amazon Comprehend behind the scenes, and report that language back along with the translation to the target language.

What kind of inputs does the service support?

Amazon Translate supports plain text input in UTF-8 format.

What are the limits on the API?

Amazon Translate real-time service calls are limited to 5,000 bytes per API call...

Data Privacy

Are text inputs processed by Amazon Translate stored, and how are they used by AWS?

Amazon Translate may store and use text inputs processed by the service solely to provide and maintain the service and to improve and develop the quality of Amazon Translate and other Amazon machine-learning/artificial-intelligence technologies. Use of your content is important for continuous improvement of your Amazon Translate customer experience, including the development and training of related technologies. We do not use any personally identifiable information that may be contained in your content to target products, services or marketing to you or your end users.

Do I still own my content that is processed and stored by Amazon Translate?

You always retain ownership of your content, and we will only use your content with your consent.

Is the content processed by Amazon Translate moved outside the AWS region where I am using Amazon Translate?

Any content processed by Amazon Translate is encrypted and stored at rest in the AWS region where you are using Amazon Translate.

Can I use Amazon Translate in connection with websites, programs or other applications that are directed or targeted to children under age 13 and subject to the Children's Online Privacy Protection Act (COPPA)?

Yes, subject to your compliance with the AWS Service Terms

Amazon Comprehend

Features

- Custom Entity Recognition: Allows you to customize Amazon Comprehend to identify terms that are specific to your domain. Using AutoML, Comprehend will learn from a small set of examples (for example, a list of policy numbers, claim numbers, or SSN), and then train a private, custom model to recognize these terms such as claim numbers in any other block of text within PDFs, plain text, or Microsoft Word documents.
- Custom Classification API: Enables you to easily build custom text classification models using your business-specific labels without learning ML. For example, your customer support organization can use Custom Classification to automatically categorize inbound requests by problem type based on how the customer has described the issue.
- Entity Recognition API returns the named entities ("People," "Places," "Locations," etc.) that are automatically categorized based on the provided text.
- Sentiment Analysis API returns the overall sentiment of a text (Positive, Negative, Neutral, or Mixed).
- Targeted Sentiment: Targeted Sentiment provides more granular sentiment insights by identifying the sentiment (positive, negative, neutral, or mixed) towards entities within text.
- PII Identification and Redaction: Use Amazon Comprehend ML capabilities to detect and redact PII in customer emails, support tickets, product reviews, social media, and more.
- Comprehend toxicity detection provides a simple, NLP-based solution for toxic content detection in text-based documents. The capability is available out-of-the-box to moderate peer-to-peer conversation in online platforms and generative AI inputs and outputs.
- **Prompt Safety Classification:** Comprehend provides a pre-trained binary classifier that can classify the input prompt as harmful or not. This can be integrated to allow LLMs to only respond to harmless content.
- Keyphrase Extraction API returns the key phrases or talking points and a confidence score to support that this is a key phrase.
- Comprehend Events lets you extract and detect event structure from a document, distilling pages of text down to easily processed data for consumption by your AI applications or graph visualization tools. This API allows you to answer who-what-when-where questions over large document sets, at scale and without prior NLP experience.
- Language Detection API automatically identifies text written in over 100 languages and returns the dominant language with a confidence score to support that a language is dominant.
- Comprehend Syntax API enables customers to analyze text using tokenization and Parts of Speech (PoS), and identify word boundaries and labels like nouns and adjectives within the text.
- Topic Modeling identifies relevant terms or topics from a collection of documents stored in S3. It will identify the most common topics in the collection and organize them in groups and then map which documents belong to which topic.
- **Multiple language support:** Comprehend can perform text analysis on German, English, Spanish, Italian, ...

General

What is Natural Language Processing?

Natural Language Processing (NLP) is a way for computers to analyze, understand, and derive meaning from textual information in a smart and useful way. By utilizing NLP, you can extract

- important phrases (**Custom classification)**
- sentiment analysis
- syntax
- entity Recognition (such as brand, date, location, person, etc.)
- language of the text.

Does Amazon Comprehend learn over time?

Yes, Amazon Comprehend uses machine learning is continuously being trained to make it better for your use cases.

Usage

Where do I store my data?

- You can use user Amazon Comprehend to read your data from S3.
- You can also write the results from Comprehend to a storage service, database, or data warehouse.

Can I import or use my own NLP model with Amazon Comprehend?

No. At the current time, Comprehend does not support custom models.

Are text inputs processed by Amazon Comprehend stored, and how are they used by AWS?

Amazon Comprehend may store and use text inputs processed by the service solely to provide and maintain the service and to develop...

Amazon Rekognition

Q: What is Amazon Rekognition?

Amazon Rekognition is a service that makes it easy to add powerful visual analysis to your applications. Rekognition Image lets you easily build powerful applications to search, verify, and organize millions of images. Rekognition Video lets you extract motion-based context from stored or live stream videos and helps you analyze them.

- **Rekognition Image** is an image recognition service that detects objects, scenes, activities, landmarks, faces, dominant colors, and image quality. Rekognition Image also extracts text, recognizes celebrities, and identifies inappropriate content in images. It also allows you to search and compare faces.
- **Rekognition Video** is a video recognition service that detects activities, understands the movement of people in frame, and recognizes objects, celebrities, and inappropriate content in videos stored in Amazon S3 and live video streams. Rekognition Video detects persons and tracks them through the video even when their faces are not visible, or as the whole person might go in and out of the scene. For example, this could be used in an application that sends a real-time notification when someone delivers a package to your door.

Q: APIs at t glance

- Content Moderation API : uses deep learning to detect explicit or suggestive adult content, violent content, weapons, visually disturbing content, drugs, alcohol, tobacco, hate symbols, gambling, and rude gestures in image and videos
- **Labels**
  - DetectLabels API. This API lets you automatically identify thousands of objects, scenes, and concepts and returns a confidence score for each label
- **Faces**
  - DetectFaces API / CompareFaces API CreateCollection API
  - IndexFaces API: accepts an image in the form of an S3 object or image byte array and adds a vector representation of the faces detected to the face collection
  - DeleteFaces API: This API operates on the face collection supplied and removes the entries corresponding to the list of FaceIds.
  - DisassociateFaces API: If the FaceID is associated with a user vector, you will first need to use the DisassociateFaces API call to remove it from the user vector.
  - SearchUsersByImage API/ SearchUsers API/ FaceID API /Analyze ID API: These APIs take in an input face and return a set of users that match, ordered by similarity score with the highest similarity first
- **Celebrity**
  - **RecognizeCelebrities API:** has been built to operate at scale and recognize celebrities across a number of categories, such as politics, sports, business, entertainment, and media
- **Text Detection**
  - DetectText API : takes in an image and returns the text label and a bounding box for each detected string of characters, along with a confidence score
  - StartTextDetection and GetTextDetection APIs: Lets you detect text and get confidence scores and timestamps for each detection

- PPE Detection
    - DetectProtectiveEquipment API: can detect common types of face covers, hand covers, and head covers, and such as high-visibility vests, safety goggles, and other unique PPE
- Video APIs

Q: Do I need any deep learning expertise to use Amazon Rekognition?

No. With Amazon Rekognition, you don't have to build, maintain or upgrade deep learning pipelines.

Q: What image and video formats does Amazon Rekognition support?

- Amazon Rekognition Image currently supports the JPEG and PNG image formats.
- Amazon Rekognition Video operations can analyze videos stored in Amazon S3 buckets. The supported file formats are MPEG-4 and MOV.

Q: What file sizes can I use with Amazon Rekognition?

Amazon Rekognition Image supports image file sizes up to 15MB when passed as an S3 object, and up to 5MB when submitted as an image byte array. Amazon Rekognition Video supports up to 10 GB files and up to 6 hour videos when passed through as an S3 file.

Label Detection

Q: What is a label?

A label is an object, scene, or concept found in an image based on its contents. For example, a photo of people on a tropical beach may contain labels such as 'Person', 'Water', 'Sand', 'Palm Tree', and 'Swimwear' (objects), 'Beach' (scene), and 'Outdoors' (concept).

Q: What is a confidence score and how do I use it?

A confidence score is a number between 0 and 100 that indicates the probability that a given prediction is correct. In the tropical beach example, if the object and scene detection process returns a confidence score of 99 for the label 'Water' and 35 for the label 'Palm Tree', then it is more likely that the image contains water but not a palm tree.

Applications that are very sensitive to detection errors (false positives) should discard results associated with confidence scores below a certain threshold.

Q: What is Object and Scene Detection?

Object and Scene Detection refers to the process of analyzing an image or video to assign labels based on its visual content. Amazon Rekognition Image does this through the DetectLabels API. This API lets you automatically identify thousands of objects, scenes, and concepts and returns a confidence score for each label. DetectLabels uses a default confidence threshold of 50.

Q: What types of labels does Amazon Rekognition support?

Rekognition supports thousands of labels belonging to common categories including, but not limited to:

- **People and Events**: ‘Wedding’, ‘Bride’, ‘Baby’, ‘Birthday Cake’, ‘Guitarist’, etc.
- **Food and Drink**: ‘Apple’, ‘Sandwich’, ‘Wine’, ‘Cake’, ‘Pizza’, etc.
- ***Nature and Outdoors***: ‘Beach’, ‘Mountains’, ‘Lake’, ‘Sunset’, ‘Rainbow’, etc.
- **Animals and Pets**: ‘Dog’, ‘Cat’, ‘Horse’, ‘Tiger’, ‘Turtle’, etc.
- **Home and Garden**: ‘Bed’, ‘Table’, ‘Backyard’, ‘Chandelier’, ‘Bedroom’, etc.
- **Sports and Leisure**: ‘Golf’, ‘Basketball’, ‘Hockey’, ‘Tennis’, ‘Hiking’, etc.
- **Plants and Flowers**: ‘Rose’, ‘Tulip’, ‘Palm Tree’, ‘Forest’, ‘Bamboo’, etc.
- **Art and Entertainment**: ‘Sculpture’, ‘Painting’, ‘Guitar’, ‘Ballet’, ‘Mosaic’, etc.
- **Transportation and Vehicles**: ‘Airplane’, ‘Car’, ‘Bicycle’, ‘Motorcycle’, ‘Truck’, etc.
- **Electronics**: ‘Computer’, ‘Mobile Phone’, ‘Video Camera’, ‘TV’, ‘Headphones’, etc.
- **Landmarks**: 'Brooklyn Bridge', 'Colosseum', 'Eiffel Tower', 'Machu Picchu', etc.

Q: How is Object and Scene Detection different for video analysis?

Rekognition Video enables you to automatically identify thousands of objects - such as vehicles or pets - and activities - such as celebrating or dancing - and provides you with timestamps and a confidence score for each label. It also relies on motion and time context in the video to accurately identify complex activities, such as “blowing a candle” or “extinguishing fire”.

Q: I can’t find the label I need. How do I request a new label?

Please send us your label requests through the Amazon Rekognition Console by typing the label name in the input field of the 'Search all labels' section and click 'Request Rekognition to detect' the requested label..

Amazon Rekognition Custom Labels

Q: Can I use Custom Labels for analyzing faces, customized text detection?

No. Custom Labels is meant for finding objects and scenes in images..

Q: Can I use Custom Labels for finding unsafe image content?

Yes. Custom Labels is meant for finding objects and scenes in images..

Q: How many images are needed to train a custom model?

The number of images required to train a custom model depends on the variability of the custom labels you want the model to predict and the quality of the training data. For example, a distinct logo overlaid on an image can be detected with 1-2 training images, while a more subtle logo required to be detected under many variations (scale, viewpoint, deformations) may need in the order of tens to hundreds of training examples with high quality annotations...

Content Moderation

Q: What is Content Moderation?

Amazon Rekognition’s Content Moderation API uses deep learning to detect explicit or suggestive adult content, violent content, weapons, visually disturbing content, drugs, alcohol, tobacco, hate symbols, gambling, and rude gestures in image and videos. Beyond flagging an image or video

based on presence of inappropriate or offensive content, Amazon Rekognition also returns a hierarchical list of labels with confidence scores. These labels indicate specific sub-categories of the type of content detected, thus providing more granular control to developers to filter and manage large volumes of user generated content (UGC)...

Facial Analysis

Q: What face attributes can I get from Amazon Rekognition?

Amazon Rekognition returns the following facial attributes, along with a bounding box for:

- Gender
- Smile
- Emotions
- Eyeglasses
- Sunglasses
- Eyes open
- Mouth open
- Mustache
- Beard
- Pose
- Quality
- Face landmarks

Q: What is face pose?

Face pose refers to the rotation of a detected face on the pitch, roll, and yaw axes. Each of these parameters is returned as an angle between -180 and +180 degrees. Face pose can be used to find the orientation of the face bounding polygon (as opposed to a rectangular bounding box), to measure deformation, to track faces accurately, and more.

Q: What is face quality?

Face quality describes the quality of the detected face image using two parameters: sharpness and brightness. Both parameters are returned as values between 0 and 1..

Q: What are face landmarks?

Face landmarks are a set of salient points, usually located on the corners, tips or mid points of key facial components such as the eyes, nose, and mouth. Amazon Rekognition DetectFaces API returns a set of face landmarks that can be used to crop faces, morph one face into another, overlay custom masks to create custom filters, and more.

Face Comparison

Q: What is Face Comparison?

Face Comparison is the process of comparing one face to one or more faces to measure similarity. Using the CompareFaces API, Amazon Rekognition Image lets you measure the likelihood that

faces in two images are of the same person. The API compares a face in the source input image with each face detected in the target input image and returns a similarity score for each comparison. You also get a bounding box and confidence score for each face detected. You can use face comparison to verify a person's identity against their personnel photo on file in near real-time.

Q: How many faces can I compare against?

You can compare one face in the source image with up to 15 detected faces in the target image.

Face Search

Q: What is Face Search?

Face Search is the process of using an input face to search for similar matches in a collection of stored faces. Using face search, you can easily build applications such as multi-factor authentication for bank payments, automated building entry for employees, and more.

Q: What is a face collection and how do I create one?

A face collection is your searchable index of face vectors, which are a mathematical representation of faces. Rekognition does not store images of faces in your collection. Using the CreateCollection API, you can easily create a collection in a supported AWS region and get back an Amazon Resource Name (ARN). Each face collection has a unique CollectionId associated with it.

Q: How do I add faces to a collection for search?

To add a face to an existing face collection, use the IndexFaces API. This API accepts an image in the form of an S3 object or image byte array and adds a vector representation of the faces detected to the face collection. IndexFaces also returns a unique FaceId and face bounding box for each of the face vectors added.

Multiple face vectors of the same person can be aggregated to create and store user vectors using the CreateUser and AssociateFaces APIs. User vectors are more robust representations than single face vectors because they contain multiple face vectors with varying degrees of lighting, sharpness, poses, appearance differences, etc. Face search with user vectors can improve accuracy significantly compared to face search with single face vectors. User vectors are stored in the same collection as the associated face vectors.

Q: How do I delete faces from a collection?

To delete a face from an existing face collection, use the DeleteFaces API. This API operates on the face collection supplied (using a CollectionId) and removes the entries corresponding to the list of FaceIds. If the FaceID is associated with a user vector, you will first need to use the DisassociateFaces API call to remove it from the user vector. Alternatively, you can delete the user vector from the collection using the DeleteUser API.

Q: How do I search for a user within a face collection?

Once you have created users and associated FaceIDs, you can search by using either an image (SearchUsersByImage), a UserId (SearchUsers), or a FaceID (SearchUsers). These APIs take in an input face and return a set of users that match, ordered by similarity score with the highest similarity first. For more details, please refer to our Searching Users example.

Q: How do I search for a face within a face collection?

Once you have created an indexed collection of faces, you can search for a face within it using either an image (SearchFaceByImage) or a FaceId (SearchFaces). These APIs take in an input face and return a set of faces that match, ordered by similarity score with the highest similarity first. For more details, please refer to our Searching Faces example.

Q: How is Face Search different for video analysis?

Rekognition Video allows you to perform real time face searches against collections with tens of millions of faces. First, you create a face collection, where you can store faces, which are vector representations of facial features. Rekognition then searches the face collection for visually similar faces throughout your video. Rekognition will return a confidence score for each of the faces in your video, so you can display likely matches in your application. User search is not supported for video analysis.

Celebrity Recognition

Q: What is Celebrity Recognition?

Amazon Rekognition's Celebrity Recognition is a deep learning based easy-to-use API for detection and recognition of individuals who are famous, noteworthy, or prominent in their field. The RecognizeCelebrities API has been built to operate at scale and recognize celebrities across a number of categories, such as politics, sports, business, entertainment, and media. Our Celebrity Recognition feature is ideal for customers who need to index and search their digital image libraries for celebrities based on their particular interest.

Q: Who can be identified by the Celebrity Recognition API?

Amazon Rekognition can only identify celebrities that the deep learning models have been trained to recognize. Please note that the RecognizeCelebrities API is not an authority on, and in no way purports to be, an exhaustive list of celebrities. The feature has been designed to include as many celebrities as possible, based on the needs and feedback of our customers. We are constantly adding new names, but the fact that Celebrity Recognition does not recognize individuals that may be deemed prominent by any other groups or by our customers is not a reflection of our opinion of their celebrity status. If you would like to see additional celebrities identified by Celebrity Recognition, please submit feedback.

Q: What sources are supported to provide additional information about a Celebrity ?

The API supports an optional list of sources to provide additional information about the celebrity as a part of the API response. We currently provide the IMDB URL, when it is available. We may add other sources at a later date.

Text Detection

Q: What is Text Detection?

Text detection is a capability of Amazon Rekognition that allows you to detect and recognize text within an image or a video, such as street names, captions, product names, overlaid graphics, video subtitles, and vehicular license plates. Text detection is specifically built to work with real-world images and videos, rather than document images. Amazon Rekognition's DetectText API takes in an image and returns the text label and a bounding box for each detected string of characters, along with a confidence score. For example, in image sharing and social media applications, you can enable visual search based on an index of images that contain the same text labels. In security applications, you can identify vehicles based on license plate numbers from images taken by traffic cams. Similarly, for videos, using the StartTextDetection and GetTextDetection APIs, you can detect text and get confidence scores and timestamps for each detection. In media and entertainment applications, you can create text metadata to support search for relevant content, such as news, sport scores, commercials, and captions. You can also review the detected text for policy or compliance violations e.g. an email address or phone number that has been overlaid by spammers.

PPE Detection

Q: What personal protective equipment (PPE) can Amazon Rekognition detect?

Amazon Rekognition "DetectProtectiveEquipment" can detect common types of face covers, hand covers, and head covers. To learn more, please refer to feature documentation. You can also use Amazon Rekognition Custom Labels to detect PPE such as high-visibility vests, safety goggles, and other PPE unique to your business. To learn about how you can use Amazon Rekognition Custom Labels for custom PPE detection, visit this github repo.

Amazon Rekognition Streaming Video Events

Q: What are Amazon Rekognition Streaming Video Events?
Amazon Rekognition Streaming Video Events uses machine learning to detect objects from connected camera to provide actionable alerts in real time. Amazon Rekognition Streaming Video events work with your new and existing Kinesis Video Streams to process video streams (up to 120 seconds per motion event) and notify you as soon a desired object of interest in detected. You can use these notifications to

- Send Smart Alerts to your end users such as "a package was detected at the front door."
- Provide home automation capabilities such as "turning on the garage light when a person is detected."
- Integrate with smart assistants such as Echo devices to provide Alexa announcements when an object is detected.
- Provide Smart Search capabilities such as search for all video clips where a package was detected.

Q: What types file formats and codecs does Amazon Rekognition Video support?
MPEG-4 (.mp4) or MOV format.

Q: What types of media analysis segments can Amazon Rekognition Video detect?

Amazon Rekognition Video can detect the following types of segments or entities for media analysis:

- **Black frames**: Videos often contain a short duration of empty black frames with no audio
- **Credits**: Amazon Rekognition Video helps you automatically identify the exact frames where the opening and closing credits start and end for a movie or TV show..
- **Shots**: A shot is a series of interrelated consecutive pictures taken contiguously by a single camera and representing a continuous action in time and space...
- **Color Bars:** Amazon Rekognition Video allows you to detect sections of video that display SMPTE or EBU color bars, which are a set of colors displayed in specific patterns to ensure color is calibrated correctly on broadcast monitors, programs, and on cameras. ..
- **Slates**: Slates are sections, typically at the beginning of a video, that contain text metadata about the episode, studio, video format, audio channels, and more..
- **Studio logos**: Studio logos are sequences that show the logos or emblems of the production studio involved in making the show..
- **Content**: Content refers to the portions of the TV show or movie that contain the program or related elements. Black frames, credits, color bars, slates, and studio logos are not considered to be content. Amazon Rekognition Video enables you to detect the start and end of each content segment in the video...

AWS Integration

Q: Does Amazon Rekognition Video work with images stored on Amazon S3?

Yes. You can start analyzing images stored in Amazon S3 by simply pointing the Amazon Rekognition API to your S3 bucket. You don’t need to move your data.