

Kimera Technologies API

v3.0

The Kimera Technologies API is a set of AI Computer Vision solutions available as a web service that allows you to automate the process of analyzing, organizing and searching through large databases of unstructured visual content.

Our SaaS (software as a service) is hosted within our cloud infrastructure and is available on a subscription basis, making it easily accessible, flexible and scalable. Accessing our platform is fast and easy, simply [Sign Up](#) and start sending requests to our REST API.

Let's get started.

Authentication

Currently the supported method for authentication is via Basic Auth with credentials (username and password) generated during your [Sign Up](#) and sent to you via email. You will need the username (the UserID generated by us) and the password you provided. You should not share this with anyone from outside your organisation as it is the entrance to your profile, data and features.

Rate limit

Despite the unlimited potential and use you could make from our API you will be limited to specific features and data based on your subscription plan. You can find more information [here](#).

User management

Let's start from the beginning. The first steps will be to set up everything in your account. To open an account please visit our [website](#)! Here we will explain from how to activate your API, deactivate it, check its status and more. All endpoints return a JSON file with a response including any messages and data needed to communicate with the user.

Now we set the different variables:

- Define as "user_id" the private access key that we sent to you in the email. Please check your email or ask for a remainder in our [website](#).
- The password is the one you created during your sign up.
- The url is the ip you are connecting with (being <https://ai.kimeratechnologies.com> the public api domain)

GET Activate API



`https://ai.kimeratechnologies.com/API/v3_0/activate`

For your convenience and safety, the API needs to be activated after 1h of inactivity. After executing this endpoint we will get everything ready for you to start using our tools! Check status to know when your account is ready!

AUTHORIZATION Basic Auth

Username	{{user_id}}
Password	{{password}}

GET Deactivate API



`https://ai.kimeratechnologies.com/API/v3_0/deactivate`

If you are done and you want to close the door to your data, you can deactivate the API. However, this process will be undertaken automatically after 1 hour of inactivity (for safety purposes in case you forget).

AUTHORIZATION Basic Auth

Username	{{user_id}}
Password	{{password}}

GET Status



https://ai.kimeratechnologies.com/API/v3_0/status?service=general_info

Once you are logged in, you can check the status of your account, the user ID, the name, the email, the type of account, the services used and more.

AUTHORIZATION Basic Auth

Username	{{user_id}}
Password	{{password}}

PARAMS

service	general_info
----------------	--------------

Here you can specify which of the following services you want to check:

- "general_info" for the account information and parameters (this is the default value in case you do not specify any service)
- "tagger" for the information about the text tagger; your

- dictionaries (active and inactive) and tags
- "visual_tagger" for the information about the visual tagger; your dictionaries (active and inactive) and tags
- "db" for the information about the data base; your fields, data tvoes and size.

GET Cancel Job



https://ai.kimeratechnologies.com/API/v3_0/cancel_job?job_id=01234567890

If you need to stop a running process, no problem, let us know which process you are willing to cancel and we will stop it ASAP so the system does not do useless work!

AUTHORIZATION Basic Auth

Username	{{user_id}}
Password	{{password}}

PARAMS

job_id	01234567890
---------------	-------------

The "job_id" is the unique number related to each job you have executed. You will find all the "job_id" for all active tasks in /status within the "general_info" service in "active_jobs".

Text Tagger

The first of Kimera Technologies' tools: Text Tagger.
This solution allows you to freely define a dictionary of whichever textual tags you need and apply it to your data base!

GET Create Text Dictionaries

```
https://ai.kimeratechnologies.com/API/v3_0/  
tagger/create_dictionary?dictionary_name=t  
hings
```

Here we will create a .json file with the words or descriptions (tags) that you want to recognize from your pictures.

We call these .json files "dictionaries". You can define and upload multiple dictionaries to the system. Here you can see an example of a dictionary called 'things':

```
{
  "animal": {
    "dog": {
      "dalmata": {
        "baby": {},
        "adult": {}},
      "bulldog": {},
      "labrador": {},
      "poodle": {
        "white": {},
        "black": {}},
      "cat": {
        "white": {},
        "black": {}},
      "frog": {
        "green": {},
        "blue": {}},
      "person": {
        "white": {},
        "african american": {},
        "asian": {},
        "latino": {}},
      "TV": {
        "LG": {},
        "Samsung": {}
      }
    }
  }
}
```

things.json

You can combine as many dictionaries as you want. You can also create hierarchical tags as you can see in the example where depending if it is a class or not it will reach it's children.

The system will respond saying that the dictionary has been successfully created and that the tags are being added to it. It will need a certain amount of time (≈ 1 second per tag) to process your dictionary.

AUTHORIZATION [Basic Auth](#)

Username	{{user_id}}
Password	{{password}}

PARAMS

dictionary_name things

e Define a name for your dictionary

Body formdata

dictionary_file Load the .json file into a dictionary with key='dictionary_file'

GET Tag Image



```
https://ai.kimeratechnologies.comAPI/v3_0/tagger/tag_image?dictionaries=things&img_url=https://m.media-amazon.com/images/I/81RLotcyzIL.jpg&confidence=0.7
```

Now lets use our dictionaries to tag our content. Select your dictionary, the image to tag and the confidence you want to have.

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

dictionaries things
The names of the dictionaries you want to use separated by commas ','

img_url https://m.media-amazon.com/images/I/81RLotcyzIL.jpg
The public url of the image you want to tag

confidence 0.7

It is a number going from 0 to 1. This parameter is related to the number of tags assigned to each image by the system. If it is set to zero, the system will always output one single tag per image - i.e. the one with more probability of being correct. If it is set to one, the system will always output all the tags of the dictionary per each image, sorted by probability. In between, it will output an intermediate number of tags so that the probability of returning the correct one is higher than the set 'confidence'. A reasonable value for this parameter is 0.7.

GET Delete Text Dictionaries

`https://ai.kimeratechnologies.comAPI/v3_0/tagger/delete_dictionary?dictionary_name=things`

If you don't want to use anymore one of your dictionaries you can delete it for good!

AUTHORIZATION Basic Auth

Username	{{user_id}}
Password	{{password}}

PARAMS

dictionary_name	things
e	Name of the dictionary to delete

GET Update Text Dictionaries

`http://ai.kimeratechnologies.com/API/v3_0/tagger/update_dictionary?dictionary_name=things`

If you want to change dictionary, delete some tags or include new ones, just upload again the new .json file where you have done your changes!

AUTHORIZATION Basic Auth

Username	{{user_id}}
Password	{{password}}

PARAMS

dictionary_name	things
e	A new .json file that also includes all the modifications in the previous dictionary.

Body formdata

dictionary_file	Load the .json file into a dictionary with key='dictionary_file'
------------------------	--

Visual Tagger

The second tool is the next generation of tagger: Visual Tagger. This solution allows you to tag content relating it to other pictures as reference.

GET Create Visual Dictionaries

```
http://ai.kimeratechnologies.com/API/v3_0/visual_tagger/create_dictionary?dictionary_name=dogs
```

Here we will create .json file with the words or descriptions (tags) and their reference images that you want to recognize from your pictures.

We call these .json files "dictionaries". You can define and upload multiple dictionaries to the system. Here is an example of a dictionary:

```
{
  "dog":
  {
    "bulldog": ["https://www.akc.org/Bulldog.jpg",
                "https://www.thesprucepets.com/f5115f.jpg",
                "https://dogsbestlife.com/bulldog-scaled.jpeg",
                "https://cdn.britannica.com/Bulldog.jpg"],
    "pitbull": ["https://upload.wikimedia.org/Bull_Terrier.jpg",
                "https://i.ytimg.com/default.jpg",
                "https://spiritdogtraining.com/pitbull-harness.jpg",
                "https://cdn-fastly.petguide.com/pitbull.jpg"],
    "boxer": ["https://www.consumer.es/boxer.jpg",
              "https://www.purina.co.uk/boxer.jpg",
              "https://www.elmundodelperro.net/690.JPG",
              "https://www.razasdeperros.com/boxer.jpg"]
  }
}
```

dogs.json

With this dictionary we want the system to recognize different kinds of dogs based on reference images of each kind. Be wise choosing the images you use as reference. Not many are required (however the more the better), but it is very important that they clearly represent the tag defined and that they are as different as possible among them.

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

dictionary_name dogs
 Define a name for your dictionary

Body formdata

dictionary_file Load the .json file into a dictionary with key='dictionary_file'

GET Tag Image



http://ai.kimeratechnologies.com/API/v3_0/visual_tagger/tag_image?dictionaries=dogs&img_url=https://cdn-fastly.petguide.com/media/2022/02/16/8247781/pitbull.jpg&confidence=0.7

Now lets use our dictionaries to tag our content. Select your dictionary, the image to tag and the confidence you want to have.

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

dictionaries dogs
 The names of the dictionaries

The names of the dictionaries
you want to use separated by
commas ','

img_url <https://cdn-fastly.petguide.com/media/2022/02/16/8247781/pitbull.jpg>

The public url of the image you
want to tag

confidence 0.7

It is a number going from 0 to 1.
This parameter is related to the
number of tags assigned to each
image by the system. If it is set
to zero, the system will always
output one single tag per image -
i.e. the one with more probability
of being correct. If it is set to
one, the system will always
output all the tags of the
dictionary per each image,
sorted by probability. In between,
it will output an intermediate
number of tags so that the
probability of returning the
correct one is higher than the set
'confidence'. A reasonable value
for this parameter is 0.7.

GET Delete Visual Dictionary

http://ai.kimeratechnologies.com/API/v3_0/visual_tagger/delete_dictionary?delete_dictionary=dogs

If you don't want to use anymore one of your dictionaries you can delete it for good!

AUTHORIZATION Basic Auth

Username `{{user_id}}`

Password {{password}}

PARAMS

delete_dictionary dogs
y Name of the dictionary to delete

GET Update Visual Dictionary

http://ai.kimeratechnologies.com/API/v3_0/visual_tagger/update_dictionary?dictionary_name=dogs

Here you can change the dictionary that you have active, the one that will be used to tag all the content.

AUTHORIZATION Basic Auth

Username {{user_id}}
Password {{password}}

PARAMS

dictionary_name dogs
e Provide the name of the dictionary that you want to use

Body formdata

dictionary_file Load the .json file into a dictionary with key='dictionary_file'

Images Database

If you have an enormous amount of images and you want to access them easily and fast, we can help you. With our database structure you can undertake search queries (text or image based) combined with all your metadata to find whatever content you are looking for within your resources. Stop wasting time finding the right piece of content!

POST Create from csv file

`http://ai.kimeratechnologies.com/API/v3_0/D
B/create_from_csv?separator=,`

The first step is to build your database. In this example we will create it from a csv file. In this case you can upload it with a .csv containing the following:

- One column called "id" - this will be the main data element identifier. Use the ones that you use internally, so it is easier for us to understand each other.
- One or more columns that start with "image_XX" - these columns contain the URLs of the images associated to each data element. Substitute the XX by the number of the image (00, 01, 02...)
- The rest of the columns can be freely defined and can contain strings or numbers - these columns will be identified as metadata fields that you will be available to use for filtering or computing any kind of formula.

The system will respond saying that the database has been successfully created and that the elements are being added to it. It will need a certain amount of time to process your database.

AUTHORIZATION Basic Auth

Username `{{user_id}}`

Password {{password}}

PARAMS

separator ,
The separator used in the .csv file

Body formdata

DB The .csv file that contains the URLs and metadata of all your content

GET Query Search



```
http://ai.kimeratechnologies.com/API/v3_0/DB/query?image_query=red&data_query=size==m'%26category=='Vestidos'&max_output_elements=10
```

We are all set, let's start the rock&roll! Provide any text description or input image and we will go through all your data in milliseconds, so you can find what you are looking for!

We can perform any Computer Vision search at the same time that we filter by any matadata you DB contains. For this Computer Vision queries you just have to type the description of whatever you are looking for. For metadata queries you can build filters and we will look only in those images that match your filtering. Separate different filters by "&" (if it is and "and") or "|" (if it is an "or"). The other conditionals used can be: "<",">","=",">=","<=". The value of the metadata field has to go between single hypons ".

AUTHORIZATION Basic Auth

AUTHORIZATION BASIC AUTH

Username	{{user_id}}
Password	{{password}}

PARAMS

image_query	red	The computer vision query (a text query with a description or a visual search query with an image url)
data_query	size=='m'&category=='Vestidos'	The metadata query disabled to perform the CV query
max_output_elements	10	The number of results you want to retrieve

GET Create a Data Base

```
http://ai.kimeratechnologies.com/API/v3_0/DB/create?data_fields=price,description&data_fields_dtype=float,str
```

In case you prefer to build it from scratch without any .csv file, you can do so. If you have already create it from a .csv file you can omit this step.

There are two default fields:

- ID: This is the element identifier (reference) that will be related to your image(s). You can use whatever you want (as far as it is alphanumeric): something you use internally, a new id for kimera, etc.
- Image(s): Of course we will need the main thing

here, the images. Each element will be able to have several images.

You define the rest, you can provide as many metadata fields as you wish. We allow three different types of data: float, integer and string. Feel free to create as many as you need!

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

data_fields price,description

The list of metadata fields separated by ','

data_fields_dtype float,str

The data type of each field in the same order as defined above. They could be: float, int or str and separated by ','

GET Add Element



```
http://ai.kimeratechnologies.com/API/v3_0/D
B/add_element?element=id=sandals1;price=
1;description=sandals;image_00=https://ima
ge.shutterstock.com/image-photo/close-sty
lish-female-shoes-outdoor-260nw-2969124
11.jpg
```

Once the database is created you can upload all the elements you need. Each element will contain an id, as many images as you want and all the metadata fields you set up.

You have to define all the metadata fields plus the two mandatory fields (the id and minimum an only image). Provide all metadata with the "name" and an "=" with the value, separating different metadatas with ','

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

element id=sandals1;price=1;description=sandals;image_00=https://image.shutterstock.com/image-photo/close-stylish-female-shoes-outdoor-260nw-296912411.jpg

Here you have to provide all the information for the element you are going to add defining all the metadata fields, setting their value with an "=" symbol and separating it by "," (Including the default ones: "id" and "image_XX"). For each element you can upload as many images as you want. In this case just start from "image_00" and continue adding data fields "image_01", "image_02"...

GET Delete Element



http://ai.kimeratechnologies.com/API/v3_0/DB/delete_element?element_id=sandals1

Sometimes we need to let things go. If you need to delete an element that you don't need anymore

delete an element that you don't need anymore, don't hesitate, tell us which and it will be gone for good.

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

element_id sandals1

The id of the element you want to delete

GET Get Element



http://ai.kimeratechnologies.com/API/v3_0/DB/get_element?element_id=sandals1

If you want to review the information of a specific element you can execute this and receive all we have so far.

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

element_id sandals1

The id of the element you want to check

GET Check All



```
http://ai.kimeratechnologies.com/API/v3_0/D  
B/get_all
```

No questions asked, no input needed, use this to get everything you have in your data base.

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

GET Edit Element



```
http://ai.kimeratechnologies.com/API/v3_0/D  
B/edit_element?element=id=sandals2;price=  
50;description=sandals;image_00=https://im  
age.shutterstock.com/image-photo/close-st  
ylish-female-shoes-outdoor-260nw-296912  
411.jpg;image_01=https://image.shutterstock  
.com/image-photo/close-stylish-female-sho  
es-outdoor-260nw-296912411.jpg
```

Maybe you have changed some metadata, or maybe you want to add a new image, or who knows. But whatever update you want to do in an element of your data base you can do it here!

You have to fill all the metadata fields and the mandatory ones (the id and minimum an only image). Provide all metadata with the "name" and an "=" with the value, separating different metadatas with ';

AUTHORIZATION Basic Auth

Username {{user_id}}

Password {{password}}

PARAMS

element	<code>id=sandals2;price=50;description=sandals;image_00=https://image.shutterstock.com/image-photo/close-stylish-female-shoes-outdoor-260nw-296912411.jpg;image_01=https://image.shutterstock.com/image-photo/close-stylish-female-shoes-outdoor-260nw-296912411.jpg</code> <p>Create the element concatenating all the data</p>
----------------	--

GET Delete Data Base

`http://ai.kimeratechnologies.com/API/v3_0/DB/delete_everything`

If you no longer need the database you uploaded or you want to start using a brand new one, please remove the older one so it does not get in our way! All images, metadata and elements will be deleted.

AUTHORIZATION Basic Auth

Username	<code>{{user_id}}</code>
Password	<code>{{password}}</code>