文档：<https://ai.baidu.com/ai-doc/FACE/7k37c1twu>

## 人脸搜索

### 业务应用

在指定人脸集合中，找到最相似的人脸

### 获取 access token

#### 请求地址

Get请求

$url = **'https://aip.baidubce.com/oauth/2.0/token'**;  
$post\_data[**'grant\_type'**] = **'client\_credentials'**;  
$post\_data[**'client\_id'**] = config(**'b\_appKey'**);  
$post\_data[**'client\_secret'**] = config(**'b\_secretKey'**);  
$res=guzzleGet($url,$post\_data);  
**return** json($res);

access\_token的有效期为30天，**切记需要每30天进行定期更换，或者每次请求都拉取新token**；

#### 返回参数

{

"refresh\_token": "25.b55fe1d287227ca97aab219bb249b8ab.315360000.1798284651.282335-8574074",

"expires\_in": 2592000,

"scope": "public wise\_adapt",

"session\_key": "9mzdDZXu3dENdFZQurfg0Vz8slgSgvvOAUebNFzyzcpQ5EnbxbF+hfG9DQkpUVQdh4p6HbQcAiz5RmuBAja1JJGgIdJI",

"access\_token": "24.6c5e1ff107f0e8bcef8c46d3424a0e78.2592000.1485516651.282335-8574074",

"session\_secret": "dfac94a3489fe9fca7c3221cbf7525ff"

}

#### 错误示例

{

"error": "invalid\_client",

"error\_description": "unknown client id"

}

#### 错误码

|  |  |  |
| --- | --- | --- |
| invalid\_client | unknown client id | API Key不正确 |
| invalid\_client | Client authentication failed | Secret Key不正确 |

### 携带access token请求

#### 请求地址：

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/search?access\_token='** . $token;

Post请求

#### 请求体

json格式

图片要经过 base64编码但不包含图片头 如data:image/jpg;base64,

图片格式支持PNG、JPG、JPEG、BMP，不支持GIF

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| image | 是 | string | 图片信息(**总数据大小应小于10M**)，图片上传方式根据image\_type来判断 |
| image\_type | 是 | string | 图片类型 **BASE64**:图片的base64值，base64编码后的图片数据，编码后的图片大小不超过2M； **URL**:图片的 URL地址( 可能由于网络等原因导致下载图片时间过长)； **FACE\_TOKEN**: 人脸图片的唯一标识，调用人脸检测接口时，会为每个人脸图片赋予一个唯一的FACE\_TOKEN，同一张图片多次检测得到的FACE\_TOKEN是同一个。 |
| group\_id\_list | 是 | string | 从指定的group中进行查找 用逗号分隔，**上限10个** |
| quality\_control | 否 | string | 图片质量控制 **NONE**: 不进行控制 **LOW**:较低的质量要求 **NORMAL**: 一般的质量要求 **HIGH**: 较高的质量要求 **默认 NONE** 若图片质量不满足要求，则返回结果中会提示质量检测失败 |
| liveness\_control | 否 | string | 活体检测控制 **NONE**: 不进行控制 **LOW**:较低的活体要求(高通过率 低攻击拒绝率) **NORMAL**: 一般的活体要求(平衡的攻击拒绝率, 通过率) **HIGH**: 较高的活体要求(高攻击拒绝率 低通过率) **默认NONE** 若活体检测结果不满足要求，则返回结果中会提示活体检测失败 |
| user\_id | 否 | string | 当需要对特定用户进行比对时，指定user\_id进行比对。即人脸认证功能。 |
| max\_user\_num | 否 | unit32 | 查找后返回的用户数量。返回相似度最高的几个用户，默认为1，最多返回50个。 |

#### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| face\_num | 是 | int | 图片中的人脸数量 |
| face\_list | 是 | array | 人脸信息列表 |
| +face\_token | 是 | string | 人脸标志 |
| +location | 是 | array | 人脸在图片中的位置 |
| ++left | 是 | double | 人脸区域离左边界的距离 |
| ++top | 是 | double | 人脸区域离上边界的距离 |
| ++width | 是 | double | 人脸区域的宽度 |
| ++height | 是 | double | 人脸区域的高度 |
| ++rotation | 是 | int64 | 人脸框相对于竖直方向的顺时针旋转角，[-180,180] |
| +user\_list | 是 | array | 匹配的用户信息列表 |
| ++group\_id | 是 | string | 用户所属的group\_id |
| ++user\_id | 是 | string | 用户的user\_id |
| ++user\_info | 是 | string | 注册用户时携带的user\_info |
|  |  |  |  |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 6575101941011,

    "timestamp": 1595904013,

    "cached": 0,

    "result": {

        "face\_token": "6cc59cb97d0e0415e4f4cd64e710036f",

        "user\_list": [

            {

                "group\_id": "group001",

                "user\_id": "SWE16081",

                "user\_info": "霍建华",

                "score": 100

            }

        ]

    }

}

## 人脸库管理

### 说明

每个开发者账号可以创建100个appid；

**每个appid对应一个人脸库，且不同appid之间，人脸库互不相通**；

每个人脸库下，可以创建多个用户组，用户组（group）数量**没有限制**；

每个用户组（group）下，可添加**无限**个user\_id，**无限**张人脸（注：为了保证查询速度，单个group中的人脸容量上限建议为**80万**）；

每个用户（user\_id）所能注册的最大人脸数量**20**；

Userid及代表一个人 将一个人的多张图片添加到该userid下

### 人脸注册

#### 请求地址

$url = 'https://aip.baidubce.com/rest/2.0/face/v3/faceset/user/add?access\_token=' . $token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| image | 是 | string | 图片信息(**总数据大小应小于10M**)，图片上传方式根据image\_type来判断。 注：组内每个uid下的人脸图片数目上限为20张 |
| image\_type | 是 | string | 图片类型 **BASE64**:图片的base64值，base64编码后的图片数据，编码后的图片大小不超过2M； **URL**:图片的 URL地址( 可能由于网络等原因导致下载图片时间过长)； **FACE\_TOKEN**：人脸图片的唯一标识，调用人脸检测接口时，会为每个人脸图片赋予一个唯一的FACE\_TOKEN，同一张图片多次检测得到的FACE\_TOKEN是同一个。 |
| group\_id | 是 | string | 用户组id，标识一组用户（由数字、字母、下划线组成），长度限制48B。**产品建议**：根据您的业务需求，可以将需要注册的用户，按照业务划分，分配到不同的group下，例如按照会员手机尾号作为groupid，用于刷脸支付、会员计费消费等，这样可以尽可能控制每个group下的用户数与人脸数，提升检索的准确率 |
| user\_id | 是 | string | 用户id（由数字、字母、下划线组成），长度限制128B |
| user\_info | 否 | string | 用户资料，长度限制256B 默认空 |
| quality\_control | 否 | string | 图片质量控制 **NONE**: 不进行控制 **LOW**:较低的质量要求 **NORMAL**: 一般的质量要求 **HIGH**: 较高的质量要求 **默认 NONE** 若图片质量不满足要求，则返回结果中会提示质量检测失败 |
| liveness\_control | 否 | string | 活体检测控制 **NONE**: 不进行控制 **LOW**:较低的活体要求(高通过率 低攻击拒绝率) **NORMAL**: 一般的活体要求(平衡的攻击拒绝率, 通过率) **HIGH**: 较高的活体要求(高攻击拒绝率 低通过率) **默认NONE** 若活体检测结果不满足要求，则返回结果中会提示活体检测失败 |
| action\_type | 否 | string | **操作方式** APPEND: 当user\_id在库中已经存在时，对此user\_id重复注册时，新注册的图片默认会追加到该user\_id下 REPLACE : 当对此user\_id重复注册时,则会用新图替换库中该user\_id下所有图片 默认使用APPEND |

#### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| log\_id | 是 | uint64 | 请求标识码，随机数，唯一 |
| face\_token | 是 | string | 人脸图片的唯一标识 |
| location | 是 | array | 人脸在图片中的位置 |
| +left | 是 | double | 人脸区域离左边界的距离 |
| +top | 是 | double | 人脸区域离上边界的距离 |
| +width | 是 | double | 人脸区域的宽度 |
| +height | 是 | double | 人脸区域的高度 |
| +rotation | 是 | int64 | 人脸框相对于竖直方向的顺时针旋转角，[-180,180] |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 1017905455594,

    "timestamp": 1595903974,

    "cached": 0,

    "result": {

        "face\_token": "6cc59cb97d0e0415e4f4cd64e710036f",

        "location": {

            "left": 159.35,

            "top": 99.15,

            "width": 131,

            "height": 129,

            "rotation": -15

        }

    }

}

### 人脸更新

#### 描述

针对一个user\_id执行更新操作，新上传的人脸图像将覆盖此user\_id原有所有图像

#### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/search?access\_token='** . $token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| image | 是 | string | 图片信息(**总数据大小应小于10M**)，图片上传方式根据image\_type来判断 |
| image\_type | 是 | string | 图片类型 **BASE64**:图片的base64值，base64编码后的图片数据，编码后的图片大小不超过2M； **URL**:图片的 URL地址( 可能由于网络等原因导致下载图片时间过长)； **FACE\_TOKEN**: 人脸图片的唯一标识 |
| group\_id | 是 | string | 用户组id，标识一组用户（由数字、字母、下划线组成），长度限制128B |
| user\_id | 是 | string | 用户id（由数字、字母、下划线组成），长度限制48B |
| user\_info | 否 | string | 用户资料，长度限制48B 默认空 |
| quality\_control | 否 | string | 图片质量控制 **NONE**: 不进行控制 **LOW**:较低的质量要求 **NORMAL**: 一般的质量要求 **HIGH**: 较高的质量要求 **默认 NONE** 若图片质量不满足要求，则返回结果中会提示质量检测失败 |
| liveness\_control | 否 | string | 活体检测控制 **NONE**: 不进行控制 **LOW**:较低的活体要求(高通过率 低攻击拒绝率) **NORMAL**: 一般的活体要求(平衡的攻击拒绝率, 通过率) **HIGH**: 较高的活体要求(高攻击拒绝率 低通过率) **默认NONE** 若活体检测结果不满足要求，则返回结果中会提示活体检测失败 |
| action\_type | 否 | string | **操作方式** UPDATE: 会使用新图替换库中该user\_id下所有图片, 若user\_id不存在则会报错 REPLACE : 当user\_id不存在时, 则会注册这个user\_id的用户 默认使用UPDATE |

#### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| log\_id | 是 | uint64 | 请求标识码，随机数，唯一 |
| face\_token | 是 | string | 人脸图片的唯一标识 |
| location | 是 | array | 人脸在图片中的位置 |
| +left | 是 | double | 人脸区域离左边界的距离 |
| +top | 是 | double | 人脸区域离上边界的距离 |
| +width | 是 | double | 人脸区域的宽度 |
| +height | 是 | double | 人脸区域的高度 |
| +rotation | 是 | int64 | 人脸框相对于竖直方向的顺时针旋转角，[-180,180] |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 579846545001,

    "timestamp": 1595904666,

    "cached": 0,

    "result": {

        "face\_token": "6891d017ed8d5fa47560432f89d098d9",

        "location": {

            "left": 149.4,

            "top": 167.43,

            "width": 188,

            "height": 187,

            "rotation": -10

        }

    }

}

### 人脸删除

#### 描述

删除用户的某一张人脸，如果该用户只有一张人脸图片，则同时删除用户。

#### 请求地址

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| user\_id | 是 | string | 用户id（由数字、字母、下划线组成），长度限制128B |
| group\_id | 是 | string | 用户组id（由数字、字母、下划线组成） 长度限制48B，删除指定group\_id中的user\_id信息 |
| face\_token | 是 | string | 需要删除的人脸图片token，（由数字、字母、下划线组成）长度限制64B |

#### 返回参数

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 1018420100165,

    "timestamp": 1595907926,

    "cached": 0,

    "result": null

}

### 人脸列表

#### 描述

用于获取一个用户的全部人脸列表

#### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/faceset/face/getlist?access\_token='** . $token;

#### 请求参数

|  |  |  |  |
| --- | --- | --- | --- |
| user\_id | 是 | string | 用户id（由数字、字母、下划线组成），长度限制48B |
| group\_id | 是 | string | 用户组id (由数字、字母、下划线组成），长度限制48B |

#### 返回参数

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 8425558479057,

    "timestamp": 1595905568,

    "cached": 0,

    "result": {

        "face\_list": [

            {

                "face\_token": "6cc59cb97d0e0415e4f4cd64e710036f",

                "ctime": "2020-07-28 11:05:43"

            }

        ]

    }

}

### 用户信息查询

#### 描述

获取人脸库中某个用户的信息(user\_info信息和用户所属的组)。

#### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/faceset/user/get?access\_token='** . $token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| user\_id | 是 | string | 用户id（由数字、字母、下划线组成），长度限制48B |
| group\_id | 是 | string | 用户组id(由数字、字母、下划线组成，长度限制48B)，如传入“**@ALL**”则从所有组中查询用户信息。注：处于不同组，但uid相同的用户，我们认为是同一个用户。 |

#### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| log\_id | 是 | uint64 | 请求标识码，随机数，唯一 |
| user\_list | 是 | array | 查询到的用户列表 |
| +user\_info | 是 | string | 用户资料，被查询用户的资料 |
| +group\_id | 是 | string | 用户组id，被查询用户的所在组 |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 5575101154545,

    "timestamp": 1595908319,

    "cached": 0,

    "result": {

        "user\_list": [

            {

                "user\_info": "霍建华更新",

                "group\_id": "group001"

            }

        ]

    }

}

### 复制用户

#### 描述

用于将已经存在于人脸库中的用户**复制到一个新的组**。

#### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/faceset/user/copy?access\_token='** . $token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| user\_id | 是 | string | 用户id，长度限制48B |
| src\_group\_id | 是 | string | 从指定组里复制信息 |
| dst\_group\_id | 是 | string | 需要添加用户的组id |

#### 返回参数

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 6515101001001,

    "timestamp": 1595908799,

    "cached": 0,

    "result": null

}

### 删除用户

#### 描述

用于将用户从某个组中删除。

#### 请求地址

$url = **' https://aip.baidubce.com/rest/2.0/face/v3/faceset/user/delete?access\_token='** . $token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| group\_id | 是 | string | 用户组id(由数字、字母、下划线组成，长度限制48B) ，如传入“**@ALL**”则从所有组中删除用户 |
| user\_id | 是 | string | 用户id（由数字、字母、下划线组成），长度限制48B |

#### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| log\_id | 是 | uint64 | 请求标识码，随机数，唯一 |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 1510199759945,

    "timestamp": 1595914957,

    "cached": 0,

    "result": null

}

### 创建用户组

#### 描述

用于创建一个空的用户组，如果用户组已存在 则返回错误。

#### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/faceset/group/add?access\_token='**.$token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| group\_id | 是 | string | 用户组id，标识一组用户（由数字、字母、下划线组成），长度限制48B。 |

#### 返回参数

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 1010016510179,

    "timestamp": 1595915216,

    "cached": 0,

    "result": null

}

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| log\_id | 是 | uint64 | 请求标识码，随机数，唯一 |

// 正确返回值

{

"error\_code": 0,

"log\_id": 3314921889,

}

// 发生错误时返回值

{

"error\_code": 223101,

"log\_id": 815967402,

"error\_msg": " group is already exist"

}

### 删除用户组

#### 描述

删除用户组下所有的用户及人脸，如果组不存在 则返回错误。 注：组内的人脸数量如果大于500条，会在后台异步进行删除。在删除期间，无法向该组中添加人脸。1秒钟可以删除20条记录，相当于一小时可以将7万人的人脸组删除干净。

#### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/faceset/group/delete?access\_token='**.$token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| group\_id | 是 | string | 用户组id，标识一组用户（由数字、字母、下划线组成），长度限48B。 |

#### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| log\_id | 是 | uint64 | 请求标识码，随机数，唯一 |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 3599358984101,

    "timestamp": 1595915489,

    "cached": 0,

    "result": null

}

### 组列表查询

#### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/faceset/group/getlist?access\_token='**.$token;

#### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| start | 否 | uint32 | 默认值0，起始序号 |
| length | 否 | uint32 | 返回数量，默认值100，最大值1000 |

#### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| group\_id\_list |  |  |  |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 3505751019989,

    "timestamp": 1595915746,

    "cached": 0,

    "result": {

        "group\_id\_list": [

            "13355818008",

            "AABBCCDDEEFF",

            "RVSS63X5J2",

            "F63F16L9AR",

            "8QKH17XGMY",

            "HTVCE4LGVF",

            "R5QTNTWN0H",

            "6XH1LA6NET",

            "55BFN8AQWA",

            "JLMA3SK4BN",

            "XKXVB4GBUM",

            "19DWDEVNUA",

            "KP63VKAGJN",

            "9K79QXU1YV",

            "QEC582UDGK",

            "LX4DKPAFSG",

            "8C2R6E4Q83",

            "CCM42B1EQD",

            "FP18M3XP8Q",

            "A13KN2GW91",

            "1YQGAW7YA0",

            "H86A613BBK",

            "HH5SU92GF3",

            "HJJUVSCFS3",

            "AAQJSXFEXD",

            "JSRSNQMCKG",

            "XJAC3PT8XN",

            "J91NUL0QYP",

            "MXHKE5JCCQ",

            "HUQAYRRGYV",

            "CP93AN5JRU",

            "B5YM5SFQ04",

            "AABBCCDDEEFF80088008",

            "0P6G8WF6PM",

            "5CEB358V59",

            "M3QLP8FJJ0",

            "SGWG0B90TY",

            "HDPBBW3SKR",

            "YHAY41YMYV",

            "MDY4E169C4",

            "A5SBXD25SG",

            "F05FDSDBNB",

            "3V8LNM768T",

            "26T9R32M8V",

            "0YQXEPBNR8",

            "NAJTKW00XW",

            "C7WHL7JC1L",

            "MW17GRGJ3A",

            "864NPEVJP4",

            "8QA139TN28",

            "SW7FE5KPLN",

            "BW0J1J8T3C",

            "8D89CRLWCV",

            "M2AFY643KD",

            "BDBDJYEN5T",

            "WVVMJUVMJP",

            "EHK1A5M8V8",

            "0UEGX38XM7",

            "CXRU1FBH7A",

            "H9V8541Q07",

            "Y258CSDEM7",

            "T8WU3M1H46",

            "R9U900JCNF",

            "9AK4HTUL2T",

            "GGH9V691T4",

            "6CCVW09PQW",

            "S4C41V44HE",

            "U0YXYKK2SM",

            "M4JCQ4ETTR",

            "1YXQGKW0PJ",

            "7LURNM1SFS",

            "9P2CSPRACU",

            "1CEWBL4EMC",

            "21VXTKPK6A",

            "WU1EH3HR29",

            "TGVWQNQX22",

            "JVF941RPNH",

            "1UMY1C3VT2",

            "GNSQ8KPR5Y",

            "E9R5QY5A8K",

            "SGCS7EY6SF",

            "Q8HX3N1PPL",

            "SCHDXHRTEY",

            "4HPXWY8M0U",

            "0QFGSB224A",

            "VAJGSKQYL7",

            "LH6C0NX6BF",

            "FPLCB0UGXL",

            "ETWAHLA7GM",

            "1LH1QJDV6R",

            "BRH6QPTY88",

            "MF5VDFF3YV",

            "G9TR3X7CW9",

            "4GEPKL13Y3",

            "KLRWU0G4DE",

            "9XD09YV5MV",

            "S0EEJU5S0K",

            "3QBLY1S258",

            "1JJXVKVD9A",

            "9TQQY1Y9N7"

        ]

    }

}

## 人脸检测

### 接口能力

**人脸检测**：检测图片中的人脸并标记出位置信息;

**人脸关键点**：展示人脸的核心关键点信息，及150个关键点信息。

**人脸属性值**：展示人脸属性信息，如年龄、性别等。

**人脸质量信息**：返回人脸各部分的遮挡、光照、模糊、完整度、置信度等信息

**人脸属性分析**，**基于人脸关键点的加工分析**，**人脸营销活动**等

### **业务应用**

**人脸属性分析**，**基于人脸关键点的加工分析**，**人脸营销活动**等

### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/detect?access\_token='** . $token;

### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| image | 是 | string | 图片信息(**总数据大小应小于10M**)，图片上传方式根据image\_type来判断 |
| image\_type | 是 | string | 图片类型 **BASE64**:图片的base64值，base64编码后的图片数据，编码后的图片大小不超过2M； **URL**:图片的 URL地址( 可能由于网络等原因导致下载图片时间过长)； **FACE\_TOKEN**: 人脸图片的唯一标识，调用人脸检测接口时，会为每个人脸图片赋予一个唯一的FACE\_TOKEN，同一张图片多次检测得到的FACE\_TOKEN是同一个。 |
| face\_field | 否 | string | 包括**age,beauty,expression,face\_shape,gender,glasses,landmark,landmark150,race,** **quality,eye\_status,emotion,face\_type,mask,spoofing信息** 逗号分隔. 默认只返回face\_token、人脸框、概率和旋转角度 |
| max\_face\_num | 否 | uint32 | 最多处理人脸的数目，默认值为1，仅检测图片中面积最大的那个人脸；**最大值10**，检测图片中面积最大的几张人脸。 |
| face\_type | 否 | string | 人脸的类型 **LIVE**表示生活照：通常为手机、相机拍摄的人像图片、或从网络获取的人像图片等 **IDCARD**表示身份证芯片照：二代身份证内置芯片中的人像照片 **WATERMARK**表示带水印证件照：一般为带水印的小图，如公安网小图 **CERT**表示证件照片：如拍摄的身份证、工卡、护照、学生证等证件图片 默认**LIVE** |
| liveness\_control | 否 | string | **活体控制** 检测结果中不符合要求的人脸会被过滤 **NONE**: 不进行控制 **LOW**:较低的活体要求(高通过率 低攻击拒绝率) **NORMAL**: 一般的活体要求(平衡的攻击拒绝率, 通过率) **HIGH**: 较高的活体要求(高攻击拒绝率 低通过率) 默认**NONE** |

### 返回参数

| **字段** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| face\_num | 是 | int | 检测到的图片中的人脸数量 |
| face\_list | 是 | array | 人脸信息列表，具体包含的参数参考下面的列表。 |
| +face\_token | 是 | string | 人脸图片的唯一标识 |
| +location | 是 | array | 人脸在图片中的位置 |
| ++left | 是 | double | 人脸区域离左边界的距离 |
| ++top | 是 | double | 人脸区域离上边界的距离 |
| ++width | 是 | double | 人脸区域的宽度 |
| ++height | 是 | double | 人脸区域的高度 |
| ++rotation | 是 | int64 | 人脸框相对于竖直方向的顺时针旋转角，[-180,180] |
| +face\_probability | 是 | double | 人脸置信度，范围【0~1】，代表这是一张人脸的概率，0最小、1最大。 |
| +angle | 是 | array | 人脸旋转角度参数 |
| ++yaw | 是 | double | 三维旋转之左右旋转角[-90(左), 90(右)] |
| ++pitch | 是 | double | 三维旋转之俯仰角度[-90(上), 90(下)] |
| ++roll | 是 | double | 平面内旋转角[-180(逆时针), 180(顺时针)] |
| +age | 否 | double | 年龄 ，当**face\_field包含age时返回** |
| +beauty | 否 | int64 | 美丑打分，范围0-100，越大表示越美。当**face\_fields包含beauty时返回** |
| +expression | 否 | array | 表情，当 **face\_field包含expression时返回** |
| ++type | 否 | string | **none**:不笑；**smile**:微笑；**laugh**:大笑 |
| ++probability | 否 | double | 表情置信度，范围【0~1】，0最小、1最大。 |
| +face\_shape | 否 | array | 脸型，当**face\_field包含face\_shape时返回** |
| ++type | 否 | double | **square**: 正方形 **triangle**:三角形 **oval**: 椭圆 **heart**: 心形 **round**: 圆形 |
| ++probability | 否 | double | 置信度，范围【0~1】，代表这是人脸形状判断正确的概率，0最小、1最大。 |
| +gender | 否 | array | 性别，**face\_field包含gender时返回** |
| ++type | 否 | string | male:**男性** female:**女性** |
| ++probability | 否 | double | 性别置信度，范围【0~1】，0代表概率最小、1代表最大。 |
| +glasses | 否 | array | 是否带眼镜，**face\_field包含glasses时返回** |
| ++type | 否 | string | **none**:无眼镜，**common**:普通眼镜，**sun**:墨镜 |
| ++probability | 否 | double | 眼镜置信度，范围【0~1】，0代表概率最小、1代表最大。 |
| +eye\_status | 否 | array | 双眼状态（睁开/闭合） **face\_field包含eye\_status时返回** |
| ++left\_eye | 否 | double | 左眼状态 [0,1]取值，越接近0闭合的可能性越大 |
| ++right\_eye | 否 | double | 右眼状态 [0,1]取值，越接近0闭合的可能性越大 |
| +emotion | 否 | array | 情绪 **face\_field包含emotion时返回** |
| ++type | 否 | string | **angry**:愤怒 **disgust**:厌恶 **fear**:恐惧 **happy**:高兴 **sad**:伤心 **surprise**:惊讶 **neutra**l:无表情 **pouty**: 撅嘴 **grimace**:鬼脸 |
| ++probability | 否 | double | 情绪置信度，范围0~1 |
| +face\_type | 否 | array | 真实人脸/卡通人脸 **face\_field包含face\_type时返回** |
| ++type | 否 | string | **human**: 真实人脸 **cartoon**: 卡通人脸 |
| ++probability | 否 | double | 人脸类型判断正确的置信度，范围【0~1】，0代表概率最小、1代表最大。 |
| +mask | 否 | array | 口罩识别 **face\_field包含mask时返回** |
| ++type | 否 | int | 没戴口罩/戴口罩 取值0或1 **0代表没戴口罩 1 代表戴口罩** |
| ++probability | 否 | double | 置信度，范围0~1 |
| +landmark | 否 | array | 4个关键点位置，左眼中心、右眼中心、鼻尖、嘴中心。**face\_field包含landmark时返回** |
| +landmark72 | 否 | array | 72个特征点位置 **face\_field包含landmark72时返回** |
| +landmark150 | 否 | array | 150个特征点位置 **face\_field包含landmark150时返回** |
| +quality | 否 | array | 人脸质量信息。**face\_field包含quality时返回** |
| ++occlusion | 否 | array | 人脸各部分遮挡的概率，范围[0~1]，0表示完整，1表示不完整 |
| +++left\_eye | 否 | double | 左眼遮挡比例，[0-1] ，1表示完全遮挡 |
| +++right\_eye | 否 | double | 右眼遮挡比例，[0-1] ， 1表示完全遮挡 |
| +++nose | 否 | double | 鼻子遮挡比例，[0-1] ， 1表示完全遮挡 |
| +++mouth | 否 | double | 嘴巴遮挡比例，[0-1] ， 1表示完全遮挡 |
| +++left\_cheek | 否 | double | 左脸颊遮挡比例，[0-1] ， 1表示完全遮挡 |
| +++right\_cheek | 否 | double | 右脸颊遮挡比例，[0-1] ， 1表示完全遮挡 |
| +++chin | 否 | double | 下巴遮挡比例，，[0-1] ， 1表示完全遮挡 |
| ++blur | 否 | double | 人脸模糊程度，范围[0~1]，0表示清晰，1表示模糊 |
| ++illumination | 否 | double | 取值范围在[0~255], 表示脸部区域的光照程度 越大表示光照越好 |
| ++completeness | 否 | int64 | 人脸完整度，0或1, 0为人脸溢出图像边界，1为人脸都在图像边界内 |
| +spoofing | 否 | double | 判断图片是否为合成图 |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 2599797905051,

    "timestamp": 1595917041,

    "cached": 0,

    "result": {

        "face\_num": 1,

        "face\_list": [

            {

                "face\_token": "6891d017ed8d5fa47560432f89d098d9",

                "location": {

                    "left": 149.4,

                    "top": 167.43,

                    "width": 188,

                    "height": 187,

                    "rotation": -10

                },

                "face\_probability": 1,

                "angle": {

                    "yaw": 20.17,

                    "pitch": 5.35,

                    "roll": -12.25

                },

                "age": 27,

                "beauty": 77.78,

                "expression": {

                    "type": "none",

                    "probability": 1

                },

                "face\_shape": {

                    "type": "oval",

                    "probability": 0.41

                },

                "gender": {

                    "type": "male",

                    "probability": 1

                },

                "glasses": {

                    "type": "none",

                    "probability": 1

                },

                "landmark": [

                    {

                        "x": 189.51,

                        "y": 195.97

                    },

                    {

                        "x": 267.97,

                        "y": 181.64

                    },

                    {

                        "x": 219.16,

                        "y": 230.96

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                    {

                        "x": 234.1,

                        "y": 279.84

                    }

                ],

                "landmark72": [

                    {

                        "x": 157.99,

                        "y": 208.65

                    },

                    {

                        "x": 161.44,

                        "y": 234.73

                    },

                    {

                        "x": 168.25,

                        "y": 260.54

                    },

                    {

                        "x": 177.39,

                        "y": 285.6

                    },

                    {

                        "x": 192.28,

                        "y": 310.71

                    },

                    {

                        "x": 216.44,

                        "y": 331.71

                    },

                    {

                        "x": 244.44,

                        "y": 340.3

                    },

                    {

                        "x": 276.85,

                        "y": 332.38

                    },

                    {

                        "x": 308.28,

                        "y": 312.91

                    },

                    {

                        "x": 333.67,

                        "y": 281.11

                    },

                    {

                        "x": 342.25,

                        "y": 246.95

                    },

                    {

                        "x": 343.98,

                        "y": 213.1

                    },

                    {

                        "x": 343.21,

                        "y": 179.91

                    },

                    {

                        "x": 171.22,

                        "y": 201.99

                    },

                    {

                        "x": 177.21,

                        "y": 194.64

                    },

                    {

                        "x": 185.34,

                        "y": 191.4

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                    {

                        "x": 194.85,

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                    },

                    {

                        "x": 204.32,

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                    },

                    {

                        "x": 196.07,

                        "y": 200.04

                    },

                    {

                        "x": 186.92,

                        "y": 202.9

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                    {

                        "x": 178.49,

                        "y": 203.43

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                    {

                        "x": 189.51,

                        "y": 195.97

                    },

                    {

                        "x": 157.27,

                        "y": 182.38

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                    {

                        "x": 163.74,

                        "y": 167.74

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                    {

                        "x": 176.29,

                        "y": 163.21

                    },

                    {

                        "x": 189.99,

                        "y": 163.5

                    },

                    {

                        "x": 202.84,

                        "y": 171.6

                    },

                    {

                        "x": 190.58,

                        "y": 173.25

                    },

                    {

                        "x": 178.03,

                        "y": 174.63

                    },

                    {

                        "x": 166.61,

                        "y": 177.51

                    },

                    {

                        "x": 249.59,

                        "y": 188.33

                    },

                    {

                        "x": 256.86,

                        "y": 179.96

                    },

                    {

                        "x": 265.72,

                        "y": 176.59

                    },

                    {

                        "x": 276.17,

                        "y": 176.88

                    },

                    {

                        "x": 287.09,

                        "y": 180.66

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                    {

                        "x": 278.09,

                        "y": 185.21

                    },

                    {

                        "x": 267.88,

                        "y": 188.04

                    },

                    {

                        "x": 258.49,

                        "y": 188.52

                    },

                    {

                        "x": 267.97,

                        "y": 181.64

                    },

                    {

                        "x": 234.6,

                        "y": 164.35

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                    {

                        "x": 247.56,

                        "y": 150.75

                    },

                    {

                        "x": 264.19,

                        "y": 146.08

                    },

                    {

                        "x": 282.71,

                        "y": 146.15

                    },

                    {

                        "x": 300.12,

                        "y": 157.8

                    },

                    {

                        "x": 282.96,

                        "y": 156.06

                    },

                    {

                        "x": 266.26,

                        "y": 157.36

                    },

                    {

                        "x": 250.17,

                        "y": 161.41

                    },

                    {

                        "x": 211.73,

                        "y": 195.18

                    },

                    {

                        "x": 209.66,

                        "y": 210.56

                    },

                    {

                        "x": 207.46,

                        "y": 226.43

                    },

                    {

                        "x": 204.93,

                        "y": 245.98

                    },

                    {

                        "x": 214.54,

                        "y": 245.51

                    },

                    {

                        "x": 237.19,

                        "y": 240.79

                    },

                    {

                        "x": 253.14,

                        "y": 238.96

                    },

                    {

                        "x": 243.63,

                        "y": 221.2

                    },

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                        "y": 283.41

                    },

                    "mouth\_lip\_lower\_inner\_1": {

                        "x": 213.71,

                        "y": 284.16

                    }

                },

                "race": {

                    "type": "yellow",

                    "probability": 1

                },

                "quality": {

                    "occlusion": {

                        "left\_eye": 0,

                        "right\_eye": 0,

                        "nose": 0,

                        "mouth": 0,

                        "left\_cheek": 0.02,

                        "right\_cheek": 0.01,

                        "chin\_contour": 0

                    },

                    "blur": 0,

                    "illumination": 176,

                    "completeness": 1

                },

                "eye\_status": {

                    "left\_eye": 0.9998422861,

                    "right\_eye": 1

                },

                "emotion": {

                    "type": "neutral",

                    "probability": 1

                },

                "face\_type": {

                    "type": "human",

                    "probability": 0.99

                },

                "mask": {

                    "type": 0,

                    "probability": 0.99

                },

                "spoofing": 0.000397785625

            }

        ]

    }

}

## 人脸对比

### 接口能力

**两张人脸图片相似度对比**：比对两张图片中人脸的相似度，并返回相似度分值；

**多种图片类型**：支持**生活照**、**证件照**、**身份证芯片照**、**带网纹照**四种类型的人脸对比；

**活体检测控制**：基于图片中的破绽分析，判断其中的人脸是否为**二次翻拍**（举例：如用户A用手机拍摄了一张包含人脸的图片一，用户B翻拍了图片一得到了图片二，并用图片二伪造成用户A去进行识别操作，这种情况普遍发生在金融开户、实名认证等环节。）；

**质量检测控制**：分析图片的中人脸的模糊度、角度、光照强度等特征，判断图片质量；

### 业务应用

用于比对多张图片中的人脸相似度并返回两两比对的得分，可用于判断两张脸是否是同一人的可能性大小。

典型应用场景：如**人证合一验证**，**用户认证**等，可与您现有的人脸库进行比对验证。

### 请求地址

$url = **'https://aip.baidubce.com/rest/2.0/face/v3/match?access\_token='**.$token;

### 请求参数

| **参数** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| image | 是 | string | 图片信息(**总数据大小应小于10M**)，图片上传方式根据image\_type来判断。 **两张图片通过json格式上传，格式参考表格下方示例** |
| image\_type | 是 | string | 图片类型 **BASE64**:图片的base64值，base64编码后的图片数据，编码后的图片大小不超过2M； **URL**:图片的 URL地址( 可能由于网络等原因导致下载图片时间过长)； **FACE\_TOKEN**: 人脸图片的唯一标识，调用人脸检测接口时，会为每个人脸图片赋予一个唯一的FACE\_TOKEN，同一张图片多次检测得到的FACE\_TOKEN是同一个。 |
| face\_type | 否 | string | 人脸的类型 **LIVE**：表示生活照：通常为手机、相机拍摄的人像图片、或从网络获取的人像图片等， **IDCARD**：表示身份证芯片照：二代身份证内置芯片中的人像照片， **WATERMARK**：表示带水印证件照：一般为带水印的小图，如公安网小图 **CERT**：表示证件照片：如拍摄的身份证、工卡、护照、学生证等证件图片 **INFRARED** 表示红外照片：使用红外相机拍摄的照片 默认LIVE |
| quality\_control | 否 | string | 图片质量控制 **NONE**: 不进行控制 **LOW**:较低的质量要求 **NORMAL**: 一般的质量要求 **HIGH**: 较高的质量要求 **默认 NONE** 若图片质量不满足要求，则返回结果中会提示质量检测失败 |
| liveness\_control | 否 | string | 活体检测控制 **NONE**: 不进行控制 **LOW**:较低的活体要求(高通过率 低攻击拒绝率) **NORMAL**: 一般的活体要求(平衡的攻击拒绝率, 通过率) **HIGH**: 较高的活体要求(高攻击拒绝率 低通过率) **默认 NONE** 若活体检测结果不满足要求，则返回结果中会提示活体检测失败 |

两张图片上传使用json格式

[

{

"image": "sfasq35sadvsvqwr5q...",

"image\_type": "BASE64",

"face\_type": "LIVE",

"quality\_control": "LOW",

"liveness\_control": "HIGH"

},

{

"image": "sfasq35sadvsvqwr5q...",

"image\_type": "BASE64",

"face\_type": "IDCARD",

"quality\_control": "LOW",

"liveness\_control": "HIGH"

}

]



### 返回参数

| **参数名** | **必选** | **类型** | **说明** |
| --- | --- | --- | --- |
| score | 是 | float | 人脸相似度得分，推荐阈值80分 |
| face\_list | 是 | array | 人脸信息列表 |
| +face\_token | 是 | string | 人脸的唯一标志 |

{

    "error\_code": 0,

    "error\_msg": "SUCCESS",

    "log\_id": 8920155559979,

    "timestamp": 1595917720,

    "cached": 0,

    "result": {

        "score": 3.457073212,

        "face\_list": [

            {

                "face\_token": "6cc59cb97d0e0415e4f4cd64e710036f"

            },

            {

                "face\_token": "6dcb55aaab7a40f45310366905d056e8"

            }

        ]

    }

}