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FACE API

AN API SERVICE THAT ANALYZES FACES IN IMAGES

This project is an embedded facial recognition application with a seamless and highly secured user experience. Features include face detection that perceives facial features and attributes – such as a face mask, glasses or face location in an image and identification of a person by a match to your private repository or via photo ID.

API ENDPOINTS:

DETECT FACE CO-ORDINATES

137.184.50.131:3000/detectface: Detects face coordinates for the given face present in image

Method: POST

Headers:

Content-type: application/json

Ocp-Apim-Subscription-Key

Body Param: should be a JSON:

```
{  
  "imageUrl": "<SAMPLE IMAGE URL>"  
}
```

Error Codes:

200: Successful

400: Bad request or invalid request

500: Internal Server Error

Sample:

Input:

POST /detectface

Detects the faces in image

Parameters

Cancel

Name	Description
imageUrl required <small>(body)</small>	the image url for face detection <div>Edit Value Model</div> <div><pre>{ "imageUrl": "https://i.pinimg.com/originals/5d/bc/e0/5dbce028f56b0d6277b80f3388aca86a.jpg"}</pre></div>

Cancel

Parameter content type
application/json

Execute

Output:

Execute

Clear

Responses

Response content type application/json

Curl

```
curl -X 'POST' \
'http://137.184.50.131:3000/detectface' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "imageUrl": "https://i.pinimg.com/originals/5d/bc/e0/5dbce028f56b0d6277b80f3388aca86a.jpg"
}'
```

Request URL

```
http://137.184.50.131:3000/detectface
```

Server response

Code

Details

200

Response body

```
[
  {
    "faceId": "0011d407-ef15-43a8-a4f2-9f3051ac07ee",
    "faceRectangle": {
      "top": 80,
      "left": 149,
      "width": 250,
      "height": 363
    }
  }
]
```

Download

Response headers

```
access-control-allow-origin: *
connection: keep-alive
content-length: 114
content-type: application/json; charset=utf-8
date: Fri, 10 Dec 2021 04:24:46 GMT
etag: W/"72-3IKoFCL/4MYRyez6HrvbE19mk"
keep-alive: timeout=5
x-powered-by: Express
```

Responses

DETECT FACE LAND LANDMARKS

137.184.50.131:3000/detectfacelandmarks : Detects face coordinates and landmarks like nose, eye, mouth coordinates if any face present in provided image

Method: POST

Headers:

Content-type: application/json

Ocp-Apim-Subscription-Key

Body Param: should be a JSON:

```
{  
  "imageUrl": "<provide image URL>"  
}
```

Error Codes:

200: Successful

400: Bad request or invalid request

500: Internal Server Error

Sample:

The screenshot shows a REST client interface for a POST request to the endpoint `/detectfacelandmarks`. The description of the endpoint is "Detects the features of faces in image". The "Parameters" section is empty. The "Body" section shows a JSON object with a single key `imageUrl` and a value `"https://i.pinimg.com/originals/5d/bc/e0/5dbce028f56b0d6277b0f3388aca86a.jpg"`. The "Parameter content type" is set to `application/json`. The interface includes "Cancel", "Execute", and "Clear" buttons.

Name	Description
imageUrl * required (body)	the image url for face detection or facelandmarks detection

```
{  
  "imageUrl": "https://i.pinimg.com/originals/5d/bc/e0/5dbce028f56b0d6277b0f3388aca86a.jpg"  
}
```

Parameter content type: `application/json`

Output:

The screenshot shows a REST client interface with the following details:

- Execute** button (blue) and **Clear** button (grey).
- Responses** section with a dropdown menu set to **application/json**.
- Curl** section showing the command:

```
curl -X 'POST' \
'http://137.184.50.131:3000/detectfacelandmarks' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "imageUrl": "https://i.pinimg.com/originals/5d/bc/e0/5dbce028f56bd6277b80f3388aca86a.jpg"
}'
```
- Request URL** section showing: `http://137.184.50.131:3000/detectfacelandmarks`
- Server response** section with a **Code** of **200** and a **Details** tab.
- Response body** section showing a JSON array with one object:

```
[
  {
    "faceId": "f173ce59-af8a-4e1b-9ee5-447daff9f728",
    "faceRectangle": {
      "top": 151,
      "left": 142,
      "width": 275,
      "height": 275
    },
    "facelandmarks": {
      "pupilLeft": {
        "x": 213.6,
        "y": 227.8
      },
      "pupilRight": {
        "x": 337.3,
        "y": 224.9
      },
      "noseTip": {
        "x": 279.3,
        "y": 291.3
      },
      "mouthLeft": {
        "x": 230.3,
        "y": 343.2
      }
    }
  }
]
```

DETECT FACE LAND LANDMARKS

137.184.50.131:3000/detectfaceemotions : This endpoint detects the face coordinates and emotions of face if any face present in image

Method: POST

Headers:

Content-type: application/json

Ocp-Api-Subscription-Key

Body Param: should be a JSON:

```
{
  "imageUrl": "<provide image URL>"
}
```

Error Codes:

200: Successful

400: Bad request or invalid request

500: Internal Server Error

Sample:

Uploaded Image:



POST /detectfaceemotions

Detects the emotions of faces in image

Parameters Cancel

Name	Description
imageUrl required (body)	the image url for face detection or face emotions detection

Edit Value | Model

```
{
  "imageUrl": "https://i.pinimg.com/originals/fc/e4/48/fce448a58b8de2ad7f3739f2247a2903.jpg"
}
```

Cancel

Parameter content type
application/json

Execute

Execute

Clear

Responses Response content type application/json

Curl

```
curl -X 'POST' \
'http://137.184.50.131:3000/detectfaceemotions' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "imageUrl": "https://i.pinimg.com/originals/fc/e4/48/fce448a58b8de2ad7f3739f2247a2903.jpg"
}'
```

Request URL

```
http://137.184.50.131:3000/detectfaceemotions
```

Server response


Code

Details

200

Response body

```
{
  "faceId": "ae79c4b8-157c-4dad-9229-ce14485f2c70",
  "faceRectangle": {
    "top": 129,
    "left": 190,
    "width": 168,
    "height": 168
  },
  "faceAttributes": {
    "headPose": {
      "pitch": -1.1,
      "roll": 7.3,
      "yaw": 24.9
    },
    "gender": "female",
    "age": 25
  }
}
```

 Download

DETECT FACE LAND LANDMARKS

137.184.50.131:3000/findsimilar: This endpoint detects face coordinates and landmarks like nose, eye, mouth coordinates if any face present in provided image

Method: POST

Headers:

Content-type: application/json

Ocp-Apim-Subscription-Key

Body Param: should be a JSON:

```
{  
  "imageUrl1": "<provide image URL>  
  "imageUrl2": "<provide image URL>  
}
```

Error Codes:

200: Successful

400: Bad request or invalid request

500: Internal Server Error

Sample Images to be compared:



Input:

POST /findsimilar

Detects faces in two images are similar or not

Parameters

Cancel

Name	Description
imageUrl required (body)	the url of two images for finding similarity <div>Edit Value Model</div> <pre>{ "imageUrl1": "https://i.pinimg.com/originals/71/7c/89/717c8947284f95250be53eddlaa5059d.jpg", "imageUrl2": "https://i.pinimg.com/736x/77/d3/8d/77d38db9dd95cc422eb3b5129bdca42f.jpg"}}</pre> <div>Cancel</div> <div>Parameter content type application/json</div>

Execute

Clear

Output:

Execute

Clear

Responses

Response content type application/json

Curl

```
curl -X 'POST' \
  'http://137.184.50.131:3000/findsimilar' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "imageUrl1": "https://i.pinimg.com/originals/71/7c/89/717c8947284f95250be53eddlaa5059d.jpg",
    "imageUrl2": "https://i.pinimg.com/736x/77/d3/8d/77d38db9dd95cc422eb3b5129bdca42f.jpg"
  }'
```

Request URL

```
http://137.184.50.131:3000/findsimilar
```

Server response

Code	Details
200	<div>Response body<pre>{ "isIdentical": true, "confidence": 0.55082}</pre><div><div></div>Download</div></div> <div>Response headers<pre>access-control-allow-origin: * connection: keep-alive content-length: 41 content-type: application/json; charset=utf-8 date: Fri, 10 Dec 2021 05:01:10 GMT etag: W/"29-zhgKSole7PM4ynUJoESf0LIGHFw" keep-alive: timeout=5 x-powered-by: Express</pre></div>

Responses

Code	Description
200	Successfully detect the faces and provide an object containing information that two faces are Similar or not.

DETECT FACE LAND LANDMARKS

137.184.50.131:3000/detectUploadedFace: This endpoint accepts the image file and detects face coordinates and landmarks like nose, eye, mouth coordinates if any face present in provided image.

Sample:

POST /detectUploadedFace

Detects the faces in uploaded image

Parameters Cancel

Name	Description
file <small>required</small> file (formData)	The uploaded file

Choose File 717c8947284...a5059d.jpg

Execute

Responses Response content type application/json

Code	Description
200	Successfully detects the face and provide a array of object containing the coordinates of faces detected in image.
400	Bad Request or invalid request
500	Internal server error

Output:

Parameters Cancel

Name	Description
file <small>required</small> file (formData)	The uploaded file

Choose File 717c8947284...a5059d.jpg

Execute Clear

Responses Response content type application/json

Curl

```
curl -X 'POST' \
'http://137.184.50.131:3000/detectUploadedFace' \
-H 'accept: application/json' \
-H 'Content-Type: multipart/form-data' \
-F 'file=@717c8947284f95250be53edd1ad5059d.jpg;type=image/jpeg'
```

Request URL

```
http://137.184.50.131:3000/detectUploadedFace
```

Server response

Code	Details
200	<div>Response body</div> <pre>[{ "faceId": "e4b83ac8-d466-454c-ac2b-ba2079c0b89a", "faceRectangle": { "top": 150, "left": 204, "width": 146, "height": 146 } }]</pre> Download

DELIVERABLES:

GITHUB URL : <https://github.com/Harith009/SI-FINAL-PROJECT>

Base swagger URL: <http://137.184.50.131:3000/docs>

All Endpoints:

Detection of Face : 137.184.50.131:3000/detectface

Detection of landmarks : 137.184.50.131:3000/detectfacelandmarks

Detection of emotions : 137.184.50.131:3000/detectfaceemotions

Compare similar photos : 137.184.50.131:3000/findsimilar

Detect uploaded file : 137.184.50.131:3000/detectUploadedFace