



Face Recognition

Description

Key Takeaways

- Facial Recognition
- Working process of Face API client library written in C#
- Application and future scope - Facial Recognition Application

1. Facial Recognition

Facial recognition is a biometric software application capable of uniquely identifying or verifying a person by comparing and analyzing patterns based on the person's facial contours. Facial recognition is mostly used for security purposes, though there is increasing interest in other areas of use. In fact, facial recognition technology has received significant attention as it has potential for a wide range of application related to law enforcement as well as other enterprises.

This application requires no physical interaction on behalf of the user. Also it is accurate and allows for high enrollment and verification rates. With this technique, applications can use data captured from faces and can accurately and quickly identify target individuals. Facial recognition techniques are quickly evolving with new approaches such as 3-D modeling, helping to overcome issues with existing techniques.

Working process of Face API client library written in C#

There are few steps we have to follow before making this application flawless.

Following each and every step will ensure the successful building of application and we can ensure that the result our application is showing is most accurate. These steps are listed below with proper description them:

Step 1: Creation of Person group

We have created a PersonGroup in this each person has several face registered and that face need to be detected from images.

Step 2: Define people for person group

A PersonGroup which is created is a collection of people, and each person is defined within a particular PersonGroup.

Step 3: Add faces

Add massive number of persons and faces to a PersonGroup for better identification.

Step 4: Train the person group

The PersonGroup must be trained before an identification can be performed using it and the training is done by the [PersonGroup – Train API](#).

Step 5: Image Identification

After the training image identification process is performed. Images will be identified to find the closest matches of the specific query person face from a person group or large person group. For each face in the facelds array, Face Identify will compute similarities between the query face and all the faces in the person group (given by personGroupId) and return candidate person(s) for that face ranked by similarity confidence.

Step 6: Face detect

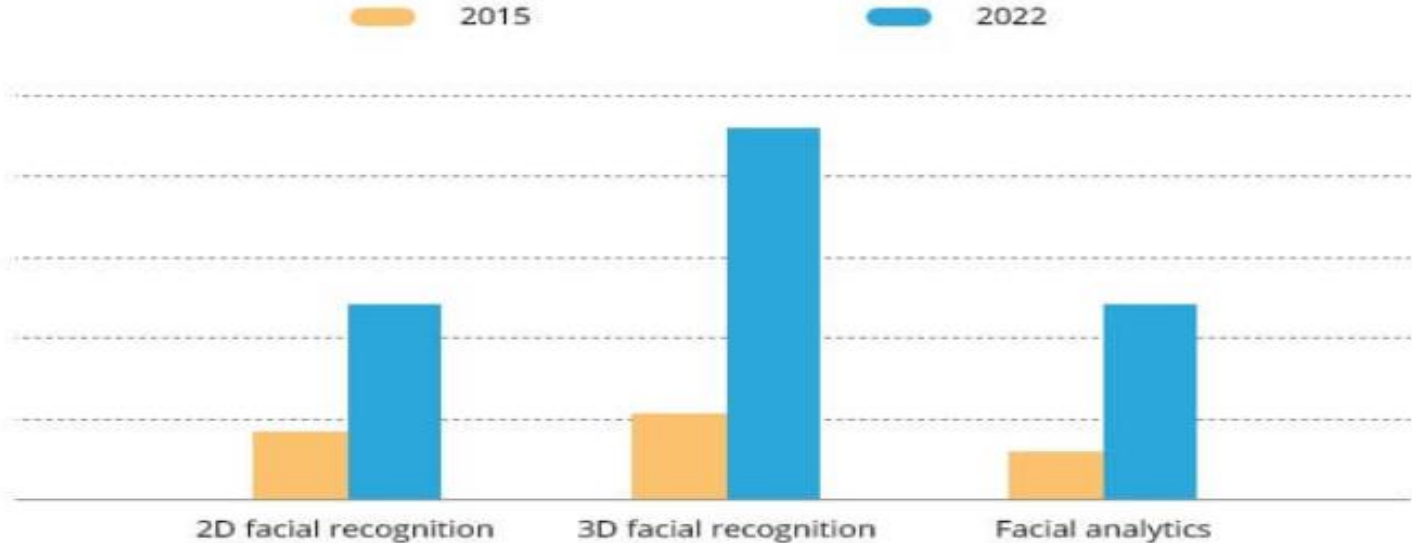
Detect human faces in an image, return face rectangles, and optionally with facelds, landmarks, and attributes.

Step 7: Retrieval of records

After detecting the face from an identified image it will retrieve the Information (Record) saved corresponding to detected faceld and its attributes.

Market Analysis

GLOBAL FACIAL RECOGNITION MARKET BY TECHNOLOGY



3D facial recognition segment would dominate the market throughout 2015-2022.



Applications

❖ Healthcare/medical face recognition

- Facial recognition can be used to scan a patient's face to determine the patient's level of pain in order to manage chronic pain and medication usage.
- Certain genetic diseases can be diagnosed using facial recognition.
- Facial recognition can be used to identify staff as well as patients, making healthcare safer and more efficient.

❖ Banking Face recognition

Other applications of image recognition in banking include the following:

- Fraud detection.
- Verification of signatures or other handwriting.
- Video surveillance.
- Personalized service
- . Interactive marketing.

Some more Applications

1. Day Care:-verify identify of individuals picking up the children.

2. Residential Security:- Alerts Homeowners of approaching personnel.

3. Make air travel more convenient:-face recognition helps to check people bags, check into flights and board planes faster.

4. Criminal identification:- FaceTech can be used to keep unauthorized people out of facilities, surely it can be used to help put them firmly inside jails.

Key Market Highlights

❑ Market Growth

The global 3D facial recognition system market is expected to grow at the CAGR to over 36% from 2018-2022.

❑ Market Driver

Increasing adaptation of 3D facial recognition in the health care center.

❑ Market Trend

Face recognition using photos on social media sites.

Training

We have created a person group. That person group must be trained before an identification can be performed here user enters all the data records to whom they want to trained. Moreover, it has to be retrained after adding or removing any person, or if any person has their registered face edited.

Training and Detection

Name

User Details

First Name

Last Name

Age

Weight

Gender

Country

Medical Records(comma separated)

Submit

Identification/Recognition

Identifying and fetching the records corresponding that person

When performing identifications, the Face API can compute the similarity of a test face among all the faces within a group, and returns the most comparable person(s) for that testing face.

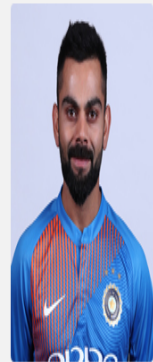
For identification user enters a URL to whom they want to fetch the records then after identification/recognition process it will display all the records of a person.

Identification

<http://www.espn.com/info/db/PICTURES/CMS/282600/282626.jp>

Submit

First Name	Last Name	Age	Gender	Weight	Country	Medical Records
Virat	Kohli	30	Male	70	India	Cough,Common Cold,Myopia





Thankyou