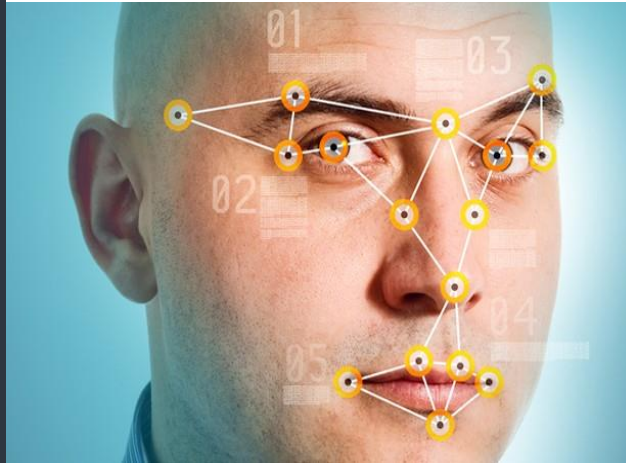


FaceQuest

INTELLIGENT FACE RECOGNITION SOFTWARE

FACE RECOGNITION TECHNOLOGY



Face Recognition deals with the identification and verification of a person from a digital image or from a video source. It can determine the unknown identity of human being on the basis of the facial characteristics and features derived from the digital image of that person. It is an artificial intelligence based system which perceive and learn contents of the image like human and perform search based on it.

Face recognition software has various features like:

- No physical interaction on behalf of user is required.
- It is socially acceptable as user have to take picture only.
- No special hardware required to capture. Images.
- Extremely fast and accurate results.
- Does not require any expert to interpret the results.
- It's the only biometric that allows active and passive identification in one to many environments.

BRIEF INTRODUCTION ABOUT FACEQUEST SOFTWARE

FaceQuest is an Artificial Intelligence based system which is capable of searching faces in a given set of database with high accuracy. The software has been benchmarked on Labelled Faces in the Wild (LFW) benchmark database, which consists of over 13,000 images of the faces collected from the web. Each face has been labeled with the name of the person pictured among which 1680 of the people pictured have two or more distinct photos in the data set. FaceQuest Software has achieved 98% accuracy on this database.

PRODUCT CAPABILITIES

A robust and fast face recognition software FaceQuest designed for various biometric system integrators has been developed which implements advanced face localization, enrollment and matching techniques using robust digital image processing and artificial intelligence algorithms to deal with following possible conditions.

Handles various variations in Camera Captured Images like

- Illumination
- Shadows
- Reflection
- Lighting Effects

Recognizes person's changing face with age gap in

- Children upto 7 Years
- Adult upto 30 years
- Elderly upto 20 years

Accurate recognition of persons in different poses

- Yaw
- Pitch
- Roll

Recognizes persons with varying skin tone

- Black
- White

Accurate recognition of Varying Ethnicity

- North Indian
- South Indian
- East Indian
- North Eastern
- Chinese
- Korean
- European
- African
- American

Handles different facial variations

- Clean Shaven
- With Moustache
- With Beard
- Wig
- Makeup
- Cap
- Spectacles/sunglasses

FACEQUEST CAPABILITIES

ACCURATE
RECOGNITION UNDER
DIFFERENT IMAGE
VARIATIONS

VARYING AGE PERSONS
RECOGNITION

ACCURATE
RECOGNITION OF
PERSONS IN DIFFERENT
POSES

HANDLES DIFFERENT
FACIAL VARIATIONS

RECOGNIZES PERSONS
WITH VARYING COLORS

HANDLES ETHNICITY
VARIATION

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RELIABILITY TEST AND ACCURACY

Humans have achieved 97.53 percent accuracy on the LFW database and till now no algorithm has come close to match this performance. The face recognition software FaceQuest has achieved **98% accuracy** on this database which for the first time not only beaten the performance of human-level accuracy but also all the similar Face Recognition product available worldwide.

SALIENT FEATURES OF FACEQUEST

ACCURACY

State of the art precision
Recognition rate of 98%

SPEED

Search from millions of
face in milliseconds

SCALABILITY

Runs on cloud server with
encrypted data
No personal information is
stored on server

ACCESSIBILITY

Can be accessed by user
from anywhere

PORTABILITY

Can be deployed on
variety of devices like PC,
Smartphones, Tablets and
any computing device.



APPLICATIONS OF FACEQUEST

- Automated Security Solution
- Surveillance System
- De-Duplication of citizen database
- Automated Criminal Identification
- E-Governance Solution
- Automated Authentication System
- Customer identification in Ecommerce
- Lost / Found Kids, Woman, Adults
- E-Wallet Authentication

SOFTWARE DEPLOYMENT REQUIREMENTS

FaceQuest Software can be deployed on varying devices for capturing images/videos and software engine can run on central / remote servers with following specifications:

- Devices for capturing image
 - Smartphones
 - Android
 - iOS
 - Windows
 - Digital Still picture Camera
 - DSLR / SLR
 - Video Surveillance Camera
 - Live Video Feed
 - Captured Video clips
- Type Of image inputs
 - Black n White / Color
 - Bmp, Png, Jpg, Tiff, Pgm, Raw
 - Resolution QVGA to ULTA HD
- Servers - Workstations / Cloud / Laptop
 - Linux – All flavors
 - Windows

Software can be deployed as a secured Web service on local / remote host based on customizable Restful API which can handle parallel requests.

Software is capable of searching a face in 10 Crore enrolled face database in less than 0.5 second with a low cost workstation.