



Facial Recognition



Technical Specifications

Powered by

SAFR™
from *real*networks.

OVERVIEW

The SAFR facial recognition platform is seamlessly integrated with the Digifort Video Management System to identify individuals that are threats, concerns, strangers, employees, VIPs, known, and unknown as they move from camera to camera using bookmarks, alerts, and notifications. Individuals can be added to the SAFR database through a mobile app or through the SAFR Desktop Application either by directly registering in person or through previously captured images or video.

Facial recognition occurs within 200 milliseconds and includes real-time alerts and notifications from SMS to email. The platform supports watchlists to detect authorized users to unwanted individuals. SAFR is the world's premier platform for live video, identifying camera unaware individuals in motion, occluded, in various positions, under different lighting, and with changes in facial features such as ageing, varying hair styles, facial hair, glasses, face paint, or makeup. The platform accurately identifies individuals with a 99.86 percent accuracy rate.





SAFR feature summary

- World-class facial recognition accuracy.
- Gender, Age and Sentiment recognition.
- Designed to recognise faces in real-world conditions, including people in motion, in dim lighting, and at occluded angles.

The differentiation of other Facial recognition products is in its accuracy and flexibility. The feedback from our customers is very positive with an accurate result even in adverse environments such as outdoor, backlighting and people in motion. Also as we are 100% software development company, SAFR platform supports

- Scalable and high-performance cloud or on-premises deployment
- Can be provided as a standalone product or integrated product to other security solutions.
- Easy to develop custom apps with REST APIs and Argus Kit SDK.
- Flexible license model.

ready-made cameras, different hardware servers and operation systems (Mac, Windows, Linux, iOS, Android), which makes easier to integrate with other component providers. FYI, I attached further product and company information. If you think any specific use case is needed, let me know to share it.

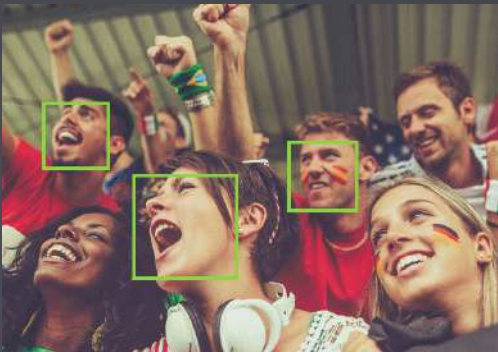


SAFR IN USE

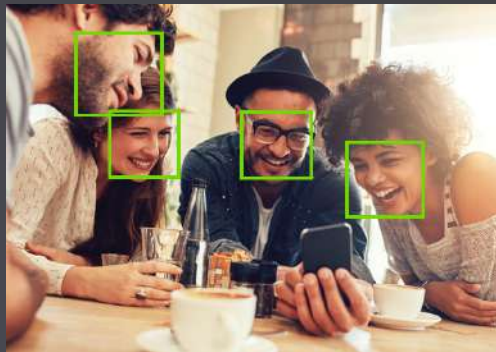
SAFR was designed to connect, adapt, and extend to different environments, specialized applications, existing hardware, or custom integrations. A wide range of use cases can benefit from SAFR facial recognition. Secure access, door lock activation, biometric entry control, event and venue monitoring, school safety, digital signage, camera integration, retail

insights, and physical space analytics are just some of the areas where SAFR can add real value.

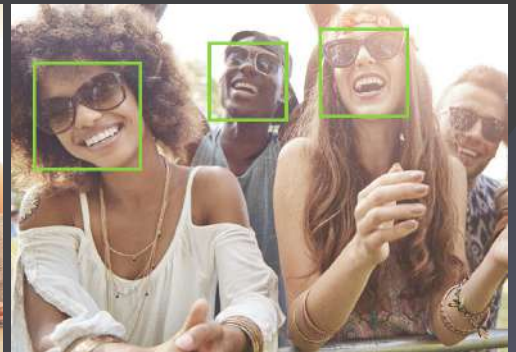
- **SECURE ACCESS**
- **VIP LOYALTY**
- **VENUE MONITORING**
- **SCHOOL SAFETY**
- **ANALYTICS**



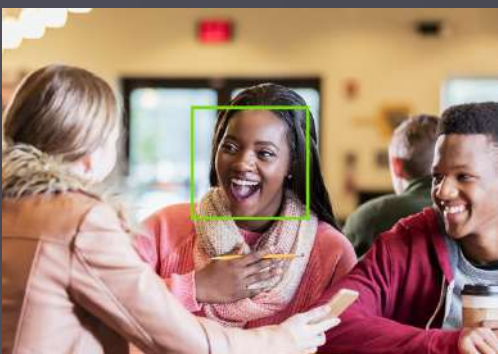
Scale – Recognize faces at varying degrees and distances from cameras.



Pose – Recognizes images in profile or at different angles.



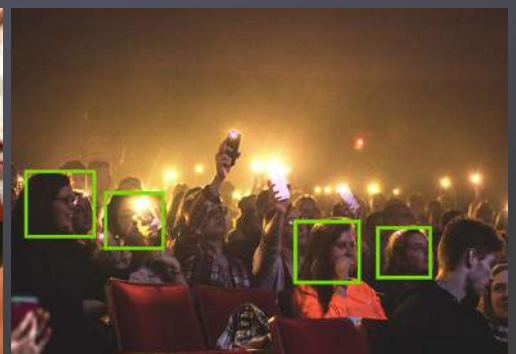
Occlusion – Identifies faces that are partially obscured.



Sentiment – Detects facial expression from smiling to frowning.



Makeup – Unique technology identifies painted or heavily made-up faces.



Illumination – Detects and recognizes faces in varying lighting conditions.

BEST IN CLASS ACCURACY

ACCURACY AND PERFORMANCE CONFIRMED BY THE NATIONAL INSTITUTES OF SCIENCE AND TECHNOLOGY (NIST)

Dependable accuracy and performance are central to any viable recognition solution. Latency, false positives, and questionable results render a system unusable. The algorithms powering the

SAFR platform were tested by NIST and contrasted with over eighty other algorithms submitted by companies and institutions from around the world.



99.8%

LFW Faces

University of MA 2017

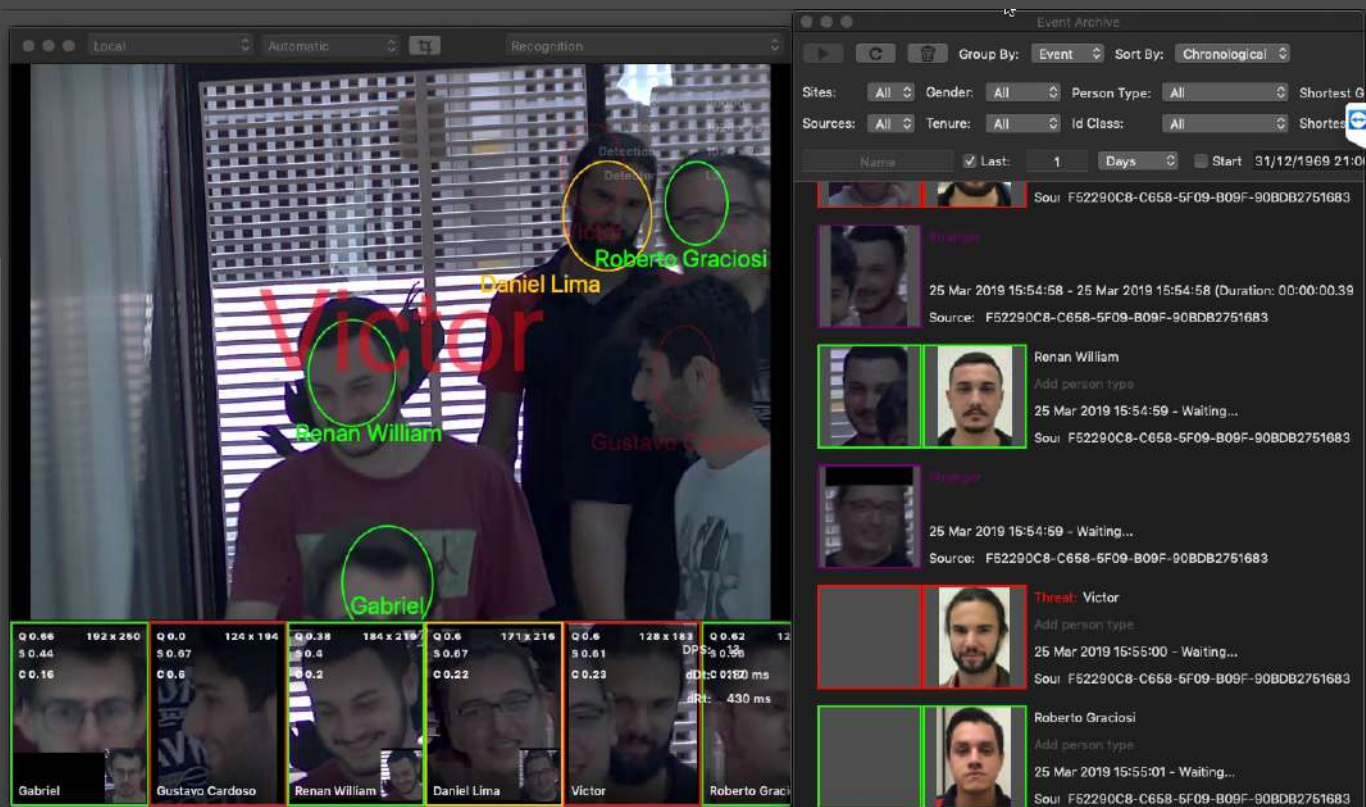


0.048

Wild Faces FNMR*

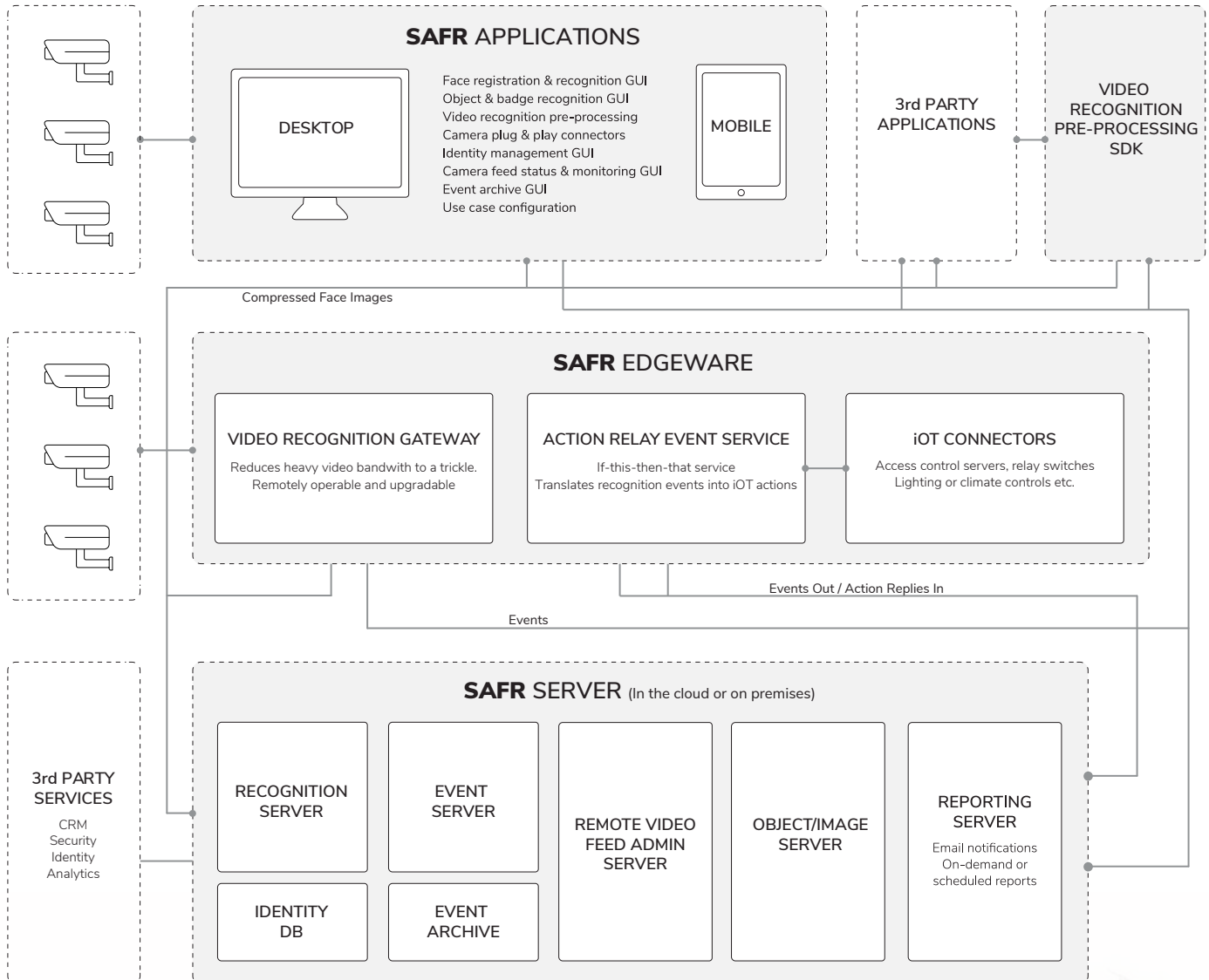
National Institute of Standards and Technology 2018

*The NIST Wild Faces FNMR (False Non Match Rate) score of 0.048 found that the SAFR algorithm correctly recognized a camera unaware individual from an imperfect image in 95.2% of cases while perfectly differentiating a population of 10,000 people.



The screenshot displays a video recognition application. The main window shows a live video feed with several faces detected and labeled with names: Victor, Renan William, Gabriel, Daniel Lima, Roberto Graciosi, and Gustavo Cardoso. A large red 'Victor' watermark is overlaid on the video. Below the video feed is a grid of six small thumbnail images, each with associated recognition metrics such as Q, S, C, and FPS. To the right of the video feed is an 'Event Archive' panel. This panel includes filters for Sites, Gender, Person Type, Sources, Tenure, and Id Class. It also shows a list of detected events, each with a small thumbnail, a name (e.g., Renan William, Threat: Victor, Roberto Graciosi), and a source ID (F52290C8-C658-5F09-B09F-90BDB2751683).

SYSTEM ARCHITECTURE



COMPONENTS

SAFR PLATFORM COMPONENTS

SAFR APPLICATION	Add and configure cameras, monitor feeds, get alerts, and view activity. It is also used to update and manage the identity database. The SAFR Application can be installed on additional laptops or desktops to allow administration and monitoring anywhere, anytime.
SAFR SERVER	facial recognition server, identity database, recognition event server, event archive, remote video feed administration server, and object server.
SAFR ACTIONS APPLICATION	Create and manage actions based on event triggers. Actions are written in Python and can be deployed for wide range of IFTTT (If this, then that) scenarios. For example, you can unlock a door, turn on a warning light, send an SMS message or email, record data for reporting, or any number of actions depending on the use case.

