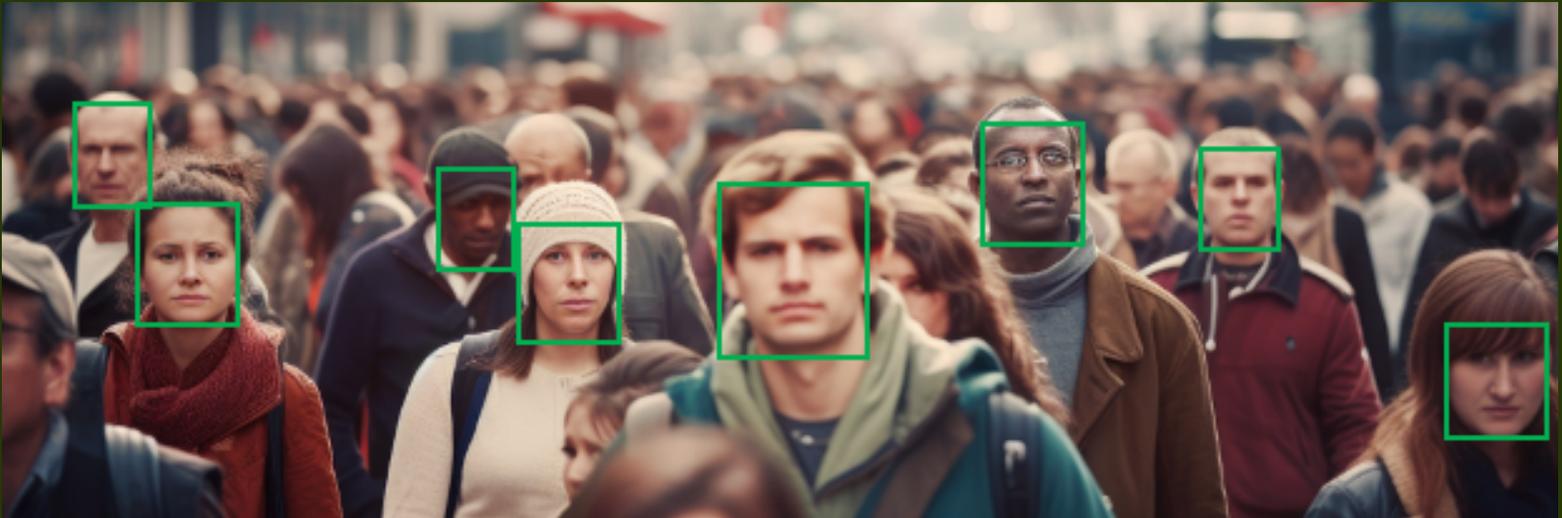# FACIAL RECOGNITION SOFTWARE FOR 3rd PARTY CAMERAS

SAFR is the world's premier facial recognition platform designed for real-world deployment across a wide range of environments. Its advanced machine learning technology delivers exceptional accuracy and performance, even when recognizing faces in challenging conditions—such as in motion, live video, with occlusions, or in low light. Notably, SAFR is engineered to seamlessly integrate with third-party cameras, empowering organizations to leverage their existing surveillance infrastructure for robust, real-time facial recognition capabilities.

SAFR is a unified facial recognition ecosystem designed for the enterprise, across access control, cameras, and mobile devices.

safr.com | sales@safr.com

Designed in the USA

Real Time Facial Recognition

Accurate
99.86% Accuracy for Wild Faces

Fast
Recognition Speed Under 100ms

Optimized for the Edge
Best in Class for Live Video Applications

Low-Bias
Among the Lowest of all Algorithms Testing by NIST

SAFR Software

For situations in which deploying a SAFR Facial Recognition Camera isn't practical, SAFR Software can analyize your existing camera streams as an effective alternative. Our best-in-class face matching technology provides critical intelligence instantly.

- Alert on Watchlist Subjects
- Manage Restricted Areas, Enhancing Access Control
- Detect Patterns to Prevent Crime and Fraud
- Monitor Occupancy and Count Queues
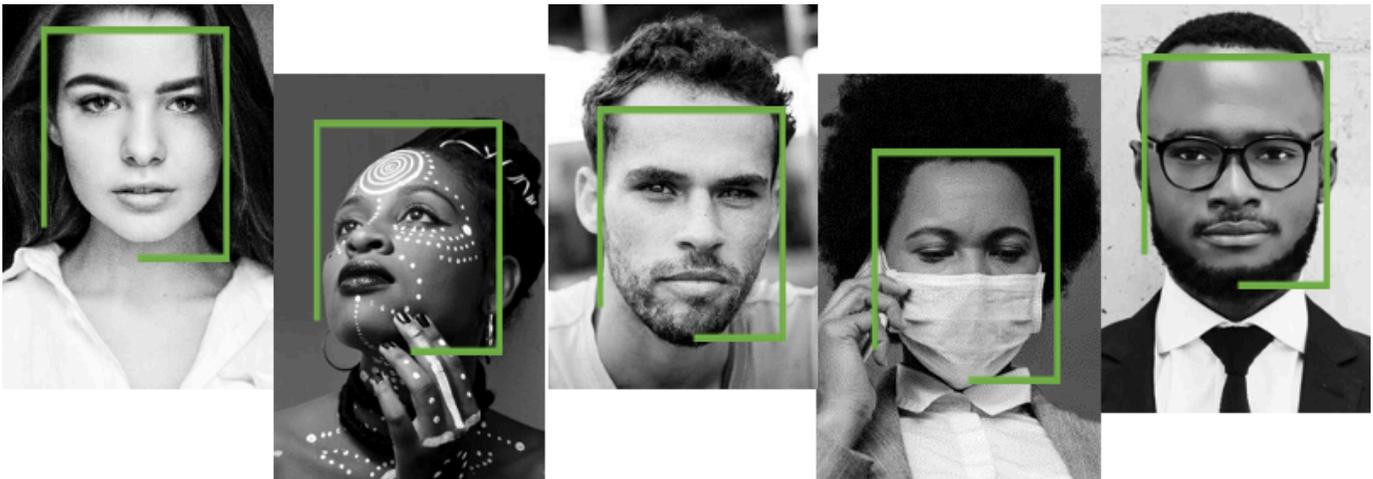
Additional Features

- **Attendance Reporting - First In, Last Out**
- **Two Factor Authentication (smile, QR Code, etc.)**
- **Liveness Detection**

- **Direction of Travel**
- **Retail Analytics (demographics, dwell time, sentiment, etc.)**
- **Loitering and Vagrancy Detection**
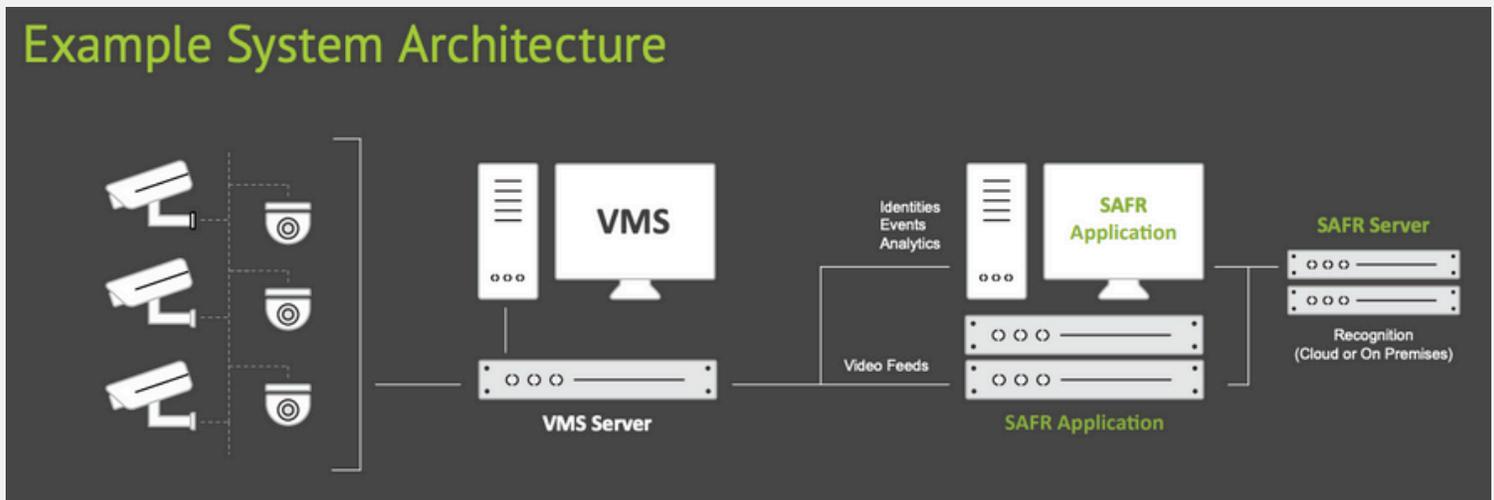
VMS Integrations

Bounding box and name overlays on live and recorded video

Alarms and notifications are configurable by person type and threat level

Automatic bookmark creation and custom bookmark generation

Search video archives by name, threat level, person type, date range, or camera using built-in VMS search features

Example System Architecture

✅ **Optimized to reduce latency and minimize false positives**

✅ **Architected to distribute the workload in a more cost-effective way, which greatly reduces OVERHEAD and bandwidth requirements**

✅ **Can be installed on Windows, or Linux**

✅ **Can be deployed on premises, in the SAFR cloud, in your cloud or hybrid**

Leverage Existing Cameras

Ethical AI with Privacy at the Forefront

SAFR from realnetworks

System & Network Requirements

Facial Recognition Server Platforms	The Facial Recognition server shall run on the following platforms: • Linux (Ubuntu 16, Ubuntu 18, CentOS 7.5, and Amazon Linux) • Windows 8.1 or higher, Windows Server 2016 or higher • NVIDIA Jetson Xavier, TX2, Xavier NX, and Nano
Hardware Performance References	Facial recognition shall be exceptionally light on CPU/GPU requirements to reduce the total cost of ownership and shall comply with the following reference performance: • Detection speed: 15–60ms @1080p on a 4 core, 1.8GHz x86 processor (no GPU) • Recognition speed: <100ms
Network Bandwidth Requirements	Facial Recognition shall operate efficiently by separating detection and recognition and bringing video processing close to the source. Detection shall occur at the edge, near or on the cameras, and recognition shall occur in a centralized service either on premises or in the cloud. Facial Recognition shall also perform both detection and recognition on the edge, allowing it to operate in a completely offline fashion. If running locally (both detection and recognition on edge), then no network connection is required for recognition or age and gender detection. If running recognition in the cloud or on premises (separate from the edge), then maximum 20 kbps per face shall be required to perform recognition or age and gender detection.
High Availability	Facial Recognition shall support a server deployment architecture that facilitates high availability and resilience to failure of one or more nodes. Identities and events can be replicated across every database node. Failure of any one node shall not result in any loss of data. Object storage nodes can be configured as fully redundant. Multiple nodes' service requests and data can be stored on highly available NAS storage. Failure of any one node will have no impact on system operation. Recognition and other web services shall operate on multiple nodes, and through external load balancing, any one node can be brought offline with no impact to ongoing system operation.

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