

Innovatrics Introduces Edge Processing-Based Facial Recognition to Preempt Security Incidents

SmartFace 5's new cascaded architecture based on edge video processing can support real-time video analysis and facial identification from an unlimited number of cameras and other video sources. In combination with already existing features such as multiple watchlist support and smart notifications, SmartFace enables the automated real-time monitoring of airports, football stadiums and other venues with high public turnout.

SmartFace 5, the AI-powered facial recognition platform of Innovatrics, combines facial recognition and anomaly detection features into a preemptive security system.

“Our aim is to prevent security incidents at the earliest moment possible by utilizing our trusted facial recognition algorithms and real-time notification system,” explains Michal Vilagi, SmartFace Development Manager.

Real-Time Assessment of Security Risks

Through multiple watchlists containing hundreds of thousands of faces and smart notifications, SmartFace can prevent security incidents from happening or accelerate the time to action in smart cities, airports, shopping centers, public transportation, stadiums, and other frequented places.

The SmartFace notification mechanism allows for the precise configuration of events and situations that will trigger a notification or an alert, which merit an operator's attention.

The brand new main airport at Palmerola, Honduras has opted for SmartFace 5 as its video surveillance solution.

Fast and Intuitive UI for Post-Incident Investigation

The latest version of SmartFace also introduces a web-based application with an intuitive UI for security professionals, which lets them perform a quick search for specific faces in video streams. SmartFace displays detected and matched faces, as

well as detected pedestrians, providing instant access to the history of recorded events and the corresponding metadata.

Previous matches and detections can be quickly filtered and searched through based on specific parameters or even a picture of a face, resulting in a quicker search process without having to manually watch through dozens of hours of video footage. These features help expedite post-incident investigations, enabling operators to save precious time.

Face Recognition for Real-Life Situations

With a proven track record of delivering biometric projects globally to various government and enterprise customers, Innovatrics' face recognition ecosystem supports many use cases and deployment options. SmartFace 5 uses proprietary, machine learning-based algorithms that are able to detect and track faces in parallel video streams in real time, without compromising speed and accuracy.

Edge Computing that Supports Unlimited Number of Video Sources

Using SmartFace's edge computing approach, a video feed can be pre-processed on the camera, resulting in significant savings of the required network bandwidth along with server resources required at the central site. The major advantage of this edge-to-cloud architecture is the scalability of the system, which can virtually support an unlimited number of cameras and protect entire cities without missing a single important event. It also allows the connection of as many cameras as required without overburdening the whole architecture. Moreover, SmartFace 5 can utilize GPUs to further improve the performance of the entire system.

Hardware Agnostic

SmartFace 5 not only supports both Windows and Linux (including embedded versions), but works with any IP or USB camera and video files. Unlike the majority of similar technologies, SmartFace 5 has been optimized for deployments solely based on CPU. However, GPU acceleration is also supported and can be utilized in use cases with a high volume of face appearances.

Innovatrics will be presenting a demo of the new features of SmartFace 5 at ISC West in Las Vegas, kicking off on March 22nd, 2022.

