innovatrics

SmartFace | **DOT**

جامعة الملك عبدالله
للعلوم والتقنية
King Abdullah University of
Science and Technology

Case Study | King Abdullah University of Science
and Technology (KAUST) | Access Control

Drive-Thru Access Control Using Face Recognition Technology

Automated identification
using facial biometrics

2× faster
processing time

KAUST, a prestigious graduate research university of science and technology founded in 2009, is home to a population of more than 7,000 international students, faculty staff and their family members from over 116 countries. It is a catalyst for innovation, economic development, and social prosperity in Saudi Arabia and the world.

Challenge

- **Ability to identify** the driver and every passenger in the car

- **24/7 access control** unaffected by light conditions, which can verify people with head coverings (particularly women wearing hijabs)

- **Update older images** of enrollees recorded in the database

Most visitors drive cars to enter the KAUST premises. Security staff had to check if they were indeed authorized before manually opening the access point. The system was both inconvenient and time consuming.

KAUST was extensively searching for a face recognition vendor to fulfill their high level of security requirements. They wanted to implement a new access control system that will not interfere with academic priorities while fitting in with the culture of the community.

Solution

- Quick and convenient **granting of access permission via facial biometrics** without stepping out of the car

- **Fast deployment** and **integration support**

Innovatrics SmartFace was integrated with the KAUST Visitor Management System (VMS), automating the identification of incoming visitors and entry into the compound.

With the driver and front and back passengers staying in the car, not to mention the varying sizes of vehicles, multiple cameras had to be installed around the gate area for a more reliable identification.

Since the VMS database contained old photos of employees and their relatives, DOT was used to enroll new employees and replace the old face images. The new system detects and identifies faces through the video streams, and matches the faces against the images stored in the database to grant access.

The entire solution was deployed in record time, taking less than 4 months.

Results

- **Security costs are reduced** with fewer staff members required
- **Faster processing** of large numbers of visitors
- **Ease of use and enhanced user experience** for the security staff and visitors

With a pioneering access control system that lets visitors simply drive through, KAUST provides the best user experience without requiring much effort from incoming guests and employees.

Even during rush hour, involving hundreds of cars and thousands of daily users, the Innovatrics face recognition system significantly improves the waiting time as there's no need to step out of the vehicle. Moreover, less security staff are needed in any access point area.

The access control system works in all lighting conditions. It can also precisely identify individuals with face masks or head coverings, even women wearing hijabs. Visitor information is instantly available on a security officer's tablet, guaranteeing seamless operations.

> " Choosing Innovatrics over the other more established players in the Saudi market paid off for us. They are masters in their trade and have a great team that supports us to ensure our transformation is scalable.

Hani Bukhari
KAUST Security Director

Security as a priority

By instantly identifying people based on their facial features, granting access becomes much faster and more reliable than manual security checks.

No More Long Queues

The system eliminates congestion in the gate area as it allows drive-thru access permission, providing the administrator greater security and operational control.

Smooth User Journey

Combining the winning features of SmartFace and DOT, the KAUST system maximizes efficiency and convenience for both registered users and visitors.

Before	After
Manual identification using IDs or badges	**Automated identification** using facial biometrics
Longer identity verification especially for daily contract workers	**2× faster** processing time
Drivers and passengers were asked **to step out of the car for identity verification**	**Identity verification** can be carried out while sitting in the car

About us

We are an independent EU-based provider of multimodal biometric solutions. Our algorithms consistently rank among the fastest and most accurate in fingerprint and face recognition. Since 2004, we have partnered with all types of organizations to build trusted and flexible biometric identification solutions. Our products are being used in more than 80 countries, benefiting more than a billion people worldwide.

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