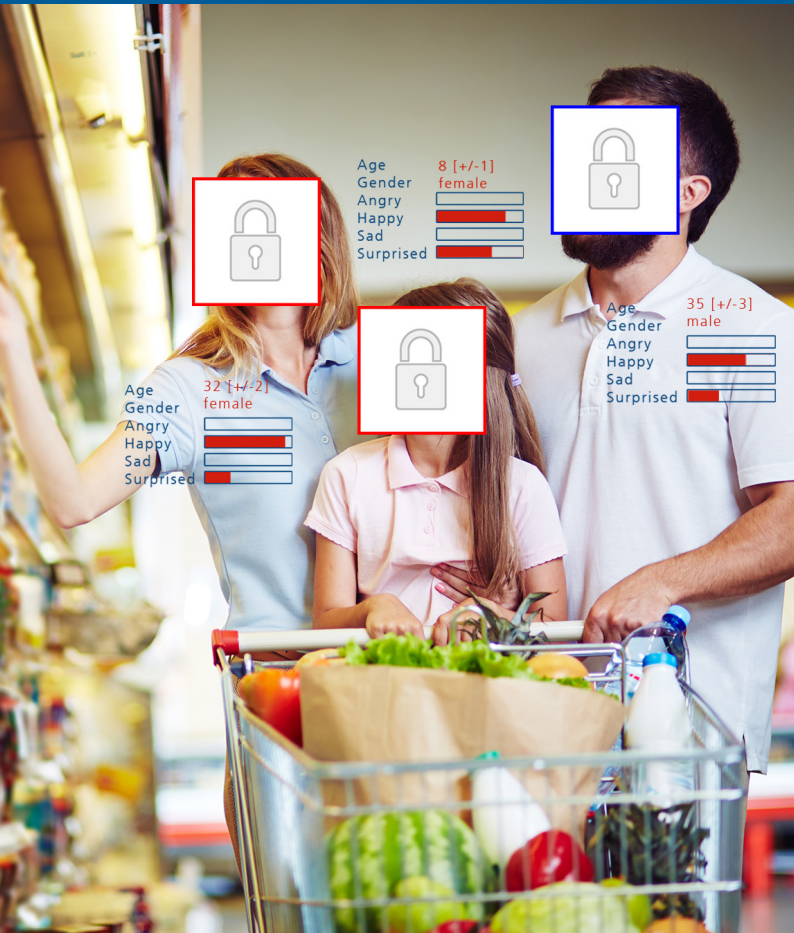


FRAUNHOFER INSTITUTE FOR
INTEGRATED CIRCUITS IIS

SHORE[®] IMAGE ANALYSIS SOFTWARE: CERTIFIED AND COMPLIANT WITH DATA PROTECTION LAW



BIG DATA WITH SHORE® – WITHOUT CLOUD COMPUTING

SHORE® software offers reliable, real-time facial analysis of any number of people in images and videos. It can determine people's gender and age, and recognize emotions based on their facial expressions. Installing SHORE® software on a camera (AVARD = Anonymous Video Analytics for Retail and Digital Signage) is a smart way to analyze images in real time without connecting to a cloud, computer or external service provider.

Your data is important to us:

Analysis services with fully anonymized metadata

SHORE® software processes neither image data nor personal data, only anonymous metainformation such as the number of people in an image and their age and gender. No specific individuals are identified.

**SHORE® – A single solution suitable for a range of applications: Certified solution complies with data protection law and offers full privacy protection.
Privacy by design – Play it safe from the start!**



When we develop new technologies, we ensure that they conform with European and German data protection law right from the very start. And, as proud recipients of the Privacy Seal from ePrivacy GmbH, we've got the certification to prove it.

Don't worry – Let SHORE® do the work

In SHORE® you have a software tool that complies with all data protection requirements. When you use it, you will have peace of mind regarding the EU General Data Protection Regulation (EU GDPR) – we've already taken care of it.

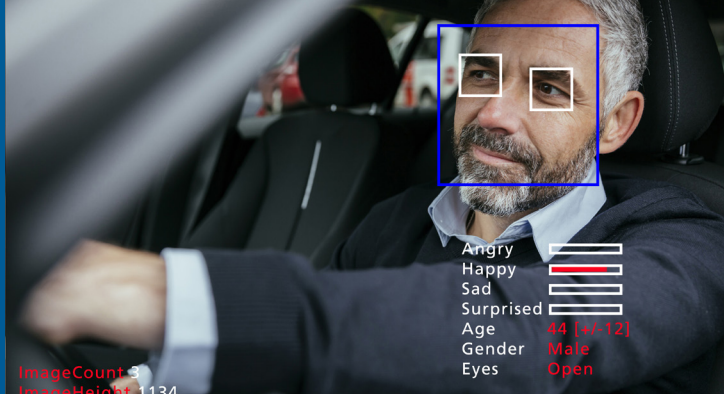
Use SHORE® to gain insights into your customers' consumer behavior at the POS, to launch marketing campaigns aimed at specific target groups, or to help elderly people remain in their own homes for longer.

Areas of application

Advertising and market research

Whether it features in digital posters, window displays in shops or TV commercials – how effective is your advertising message, and how can you further boost its impact?

This is where SHORE® comes in. The analysis software determines if consumers – and which consumer types – show interest in a



product or advertisement, and calculates for how long it grabs their attention.

Driver assistance systems

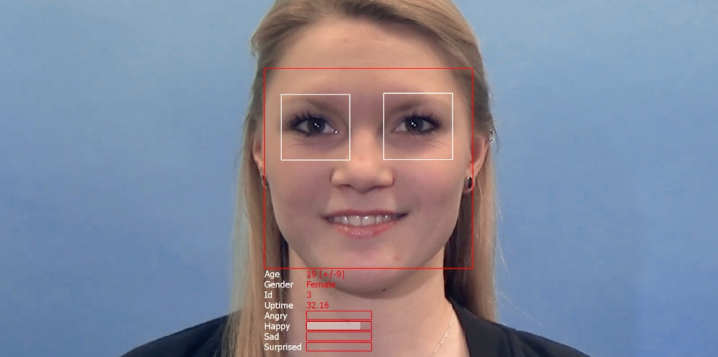
Driver drowsiness detection is a key feature of today's smart automotive assistance systems. SHORE® can reliably detect if the driver is drowsy or distracted, effectively minimizing the risk of an accident at all times

Medical engineering – Assisted living

Living alone and taking care of your everyday needs aren't a problem provided you're in good health. But what happens when these things start to become more difficult?

Embedded in an ambient assisted living (AAL) system, our SHORE® software solution helps speed up the process of supporting the sick and the elderly and providing assistance in an emergency.

Check out our demo version to discover what SHORE® can do for you and get some ideas about how you might use our solution. Download your free demo software here: www.iis.fraunhofer.de/shore



Technical data

- Accepted range for inclination of the head (tilting to the side): approx. $\pm 60^\circ$
- Accepted range for rotation of the head (turning to the side profile): approx. $\pm 90^\circ$
- Frontal face detection: 91.5% detection rate (based on CMU/MIT dataset)
- Gender detection 94.3% detection rate (based on BioID dataset)
- Real-time data processing on low-power hardware
- e.g. Raspberry Pi VGA: Processing of the image data on embedded platforms:
 - Face detection/marker/analysis 9.65 fps
 - Face detection 41.36 fps

Your advantages at a glance:

- Compliance with the EU General Data Protection Regulation (EU GDPR)
- Real-time face detection and analysis of facial features
- Age and gender estimation
- Platform-independent software: Windows, Linux, Mac OS, Android and ARMv7

Do you have any questions?

We would be happy to assist you. Please contact us at:
[facedetection@iis.fraunhofer.de](mailto: facedetection@iis.fraunhofer.de)

www.iis.fraunhofer.de/image-analysis

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