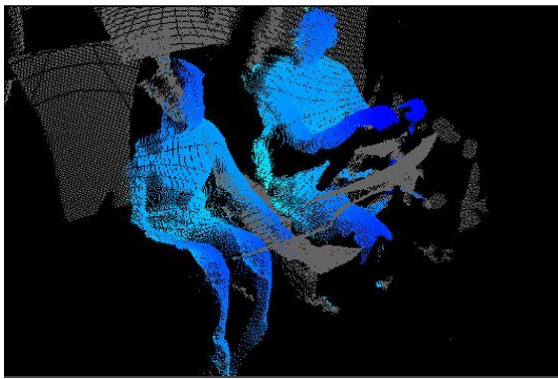




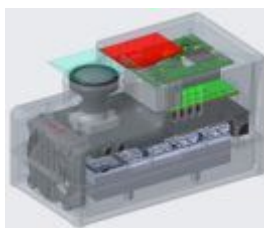
IN-CABIN AUTOMOTIVE 3D MONITORING

« SELLING » STATEMENT:

A high-performance deep learning algorithm for reliable occupant detection, segmentation and classification targeting the implementation of higher-level functions linked to safety/comfort in the context of challenging automated driving/shared mobility scenarios based on 3D ToF sensor data.



3D capture of an automotive cabin scene



High-resolution wide-FOV ToF cameras used in VIZTA: modified S2 and Kinect Azure

KEY FEATURES

Highly accurate car interior monitoring based on a wide-FOV ToF camera and a highly performant embedded deep learning algorithm for occupant detection, segmentation, and classification

Novel AI methods dedicated to 3D ToF-data processing

Optimal algorithms for 3D object detection and segmentation

Synthetic 3D-data generation

Algorithms for domain adaptation from synthetic to real 3D data for efficient transfer learning of deep neural networks

5 peer reviewed scientific papers on international conferences on computer vision and machine learning

Public benchmark data set with real and synthetic data “VIZTA-TICaM” (see <https://vizta-tof.kl.dfki.de/>)

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