RETINA

NEXT-GENERATION PHOTONICS SENSOR SYSTEM

USE CASE IN AUTOMOTIVE

MULTIMODAL SENSING FOR OBSTACLES AND COLLISION AVOIDANCE UNDER REALISTIC CONDITIONS.

Improve collision avoidance by detecting and measuring people and objects position, size and shape, as well as distance and motion ahead in challenging conditions.

Sensors:

- Long-range LIDAR
- Commercial camera

RETINA PROJECT aims to create innovative spectral imagers and chip-based LIDAR sensors and combine them in a versatile multimodal perception system.

The mission is to address the critical demand for performance, cost-efficiency, and customization in key sectors by creating a holistic framework for the agile development of machine learning-based perception algorithms and next-generation hardware solutions.

CORE TECHNOLOGIES

- Short- and long-range FMCW LiDARs on chip
- Vis-NIR-SWIR Spectral Quantum Dot Imagers
- Integrated Optical Microfilters
- Ultra-Low-Power Camera Modules
- Ground, Vehicle, and Drone platforms

info@retina-project.eu @retinaeu linkedin.com/company/retina-project

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