RETINA

NEXT-GENERATION PHOTONICS SENSOR SYSTEM

RETINA harnesses the power of Photonic Integrated Circuits (PIC), Quantum Dots (QDs), and advanced CMOS and InGaAs detectors to revolutionize sensory systems. Our technology extends across the VIS-NIR and SWIR ranges, offering unparalleled light sensitivity and spectral range.

- PIC-Based Lidar
- Quantum Dots
- CMOS and InGaAs detectors
- Machine-learning Algorithms

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.

APPLICATIONS

HEALTHCARE

Identifying tumorous cells and monitoring blood perfusion during surgeries.

AUTOMOTIVE

Enhancing Advanced Driver-Assistance Systems (ADAS) for collision detection in autonomous vehicles.

AGRICULTURE

Implementing precision viticulture solutions for water stress management and pathogen infection prediction.

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