Special Issue

Deep Learning-Based Object Recognition via Video Analysis

Message from the Guest Editor

Driven by the explosive growth of camera-based sensing platforms-ranging from UAVs and autonomous vehicles to wearable and smart-city surveillance systems-there is an urgent demand for algorithms that can reliably recognize and track objects in continuous video streams. Traditional vision pipelines built on handcrafted features and sequential motion models have laid important groundwork; however, their fusion with deep neural networks has unleashed a new generation of spatio-temporal architectures capable of real-time object detection, multi-object tracking, re-identification, and fine-grained scene understanding. Video cameras are among the most ubiquitous and information-rich sensing modalities, and turning their raw pixel streams into actionable, object-level intelligence is central to many of the journal's core application areas, including autonomous navigation, industrial automation, environmental monitoring, smart healthcare, and security. By highlighting novel algorithms, datasets, and hardware–software co-designs that advance object recognition in video, this Special Issue aims to catalyze cross-disciplinary research that converts sensor data into trustworthy insight.

Guest Editor

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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