Special Issue

Object Detection and Tracking Using Deep Learning

Message from the Guest Editors

Target detection and tracking technologies are vital in autonomous driving, surveillance, UAV navigation, and communication systems. Deep learning has revolutionized these capabilities, enabling advanced detection and tracking of both visual objects and signals. In complex environments, such as communication and radar systems, signal identification and modulation recognition enhance precise positioning and tracking. This Special Issue highlights deep learning applications in target detection, tracking, and signal recognition, focusing on integrating spatial target information with signal characteristics for robust performance.

- novel deep learning methods for target detection and signal tracking;
- multi-target tracking in communication signals;
- modulation recognition for target tracking;
- radar and communication signal detection;
- signal recognition in noisy or interfered environments;
- multimodal systems combining visual and signal processing; real-time signal detection and tracking;
- self-supervised and unsupervised learning applications;
- target classification in communication signal processing;
- multimodal signal fusion for enhanced performance in complex environments.

Guest Editors

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Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

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