Special Issue

Machine Learning Applications in Unmanned Aerial Vehicles and Drones

Message from the Guest Editors

This Special Issue focuses on the integration of machine learning techniques in unmanned aerial vehicles (UAVs) and drone systems, emphasizing innovative research, practical applications, and emerging trends. As UAVs and drones continue to play a crucial role in sectors such as surveillance, agriculture, delivery, infrastructure inspection, and environmental monitoring, machine learning enables autonomy, real-time decision-making, and intelligent behavior in dynamic environments. We invite high-quality contributions that explore machine learning applications in object and obstacle detection, flight control, route optimization, and swarm coordination. Special attention will be given to the use of onboard sensors, such as cameras, light detection and ranging (LiDAR), radio detection and ranging (radar), global positioning system (GPS), and inertial measurement units (IMUs), to enhance navigation, environment mapping, and situational awareness. The Special Issue aims to showcase both theoretical advancements and practical implementations of machine learning in UAV systems, particularly those with real-world validation.

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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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