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AI-Based Object Detection and Tracking in UAVs: Challenges and Research Directions

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Message from the Guest Editors

Combining autonomous unmanned aerial vehicles (UAVs) and AI-based object detection and tracking could significantly improve efficiency, reduce cost, and lower risks for various applications. With fast developments in UAV platform design, cameras, micro-computers, and image-processing algorithms, autonomous UAVs have become a promising sensing platform for various applications such as environment monitoring and infrastructure inspection.

The key aim of this Special Issue is to bring together innovative research that uses off-the-shelf or custom-made platforms to extend autonomous aerial sensing capabilities. Contributions from all fields related to UAVs and aerial-image processing techniques are of interest, particularly including, but not limited to, the following topics:

- Unmanned aerial vehicle (UAV) system;
- Machine learning;
- AI-based data processing;
- Object detection;
- Object tracking;
- Localization and mapping;
- Path planning;
- Obstacle avoidance;
- Multi-agent collaboration.



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Special Issue



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Message from the Editor-in-Chief

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