Special Issue

Advanced Remote Sensing Image Processing Techniques for Plant Disease Detection

Message from the Guest Editor

In recent years, significant progress has been made in leveraging remote sensing technologies to efficiently monitor crop conditions over large areas. These technologies help swiftly detect early signs of anomalies in crop health and facilitate precise responses, for example, by spraying pesticides only on affected spots. However, challenges remain. Early symptoms of plant diseases and pest infestations are often very subtle, and the targets to be detected (such as small lesions or tiny pests) are extremely small, requiring high spatial resolution for reliable detection. Moreover, applying supervised machine learning in this context depends heavily on training data. It is crucial to accumulate sufficient datasets for each crop and each type of pest or disease, and to continually refine the models. Although the focus of this Special Issue is on advanced remote sensing image processing techniques for plant disease detection, contributions on detection using image classification models and image segmentation models are also welcome. Moreover, accompanying technologies and applications, such as sensors for plant disease detection, are also welcome.

Guest Editor

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Message from the Editor-in-Chief

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