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Application of AI in Plants

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Message from the Collection Editors

Dear Colleagues,

In order to feed the increasing global population, now, more than ever, it is important to provide breeders with new tools that allow them to develop the next generation of crop varieties. The application of artificial intelligence (AI) could be a powerful facilitator towards such goals, particularly in combination with the emerging technologies that are becoming widely adopted in the field, e.g., high-throughput genotyping, multi-omic sequencing approaches, targeted mutagenesis including genome editing, high-throughput phenotyping, and drone imaging.

The objective of this Topical Collection is to show how AI and machine learning (ML) algorithms are being applied to advance plant health and development, and how they could be used and improved in the future in order to aid food security, particularly when this involves the integration of state-of-the-art technologies, e.g., multi-omic datasets. We hope to increase the recognition, as well as the accessibility of AI/ML tools in agricultural and plant research more generally. Review articles on the latest technologies, methodologies, and bottlenecks in the area will also be of interest.



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Topical Collection



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Message from the Editor-in-Chief

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