Topical Collection

Application of AI in Plants

Message from the Collection Editors

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.

Collection Editors

Dr. Laura-Jayne Gardiner
IBM Research, The Hartree Centre, Warrington WA4 4AD, UK

Dr. Ritesh Krishna
IBM Research, The Hartree Centre, Warrington WA4 4AD, UK

Plants

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 6.5
Indexed in PubMed

mdpi.com/si/75334

Plants
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
plants@mdpi.com

mdpi.com/journal/plants

Plants

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 6.5
Indexed in PubMed

mdpi.com/journal/plants

About the Journal

Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

Editor-in-Chief

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB R3T 2N2, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)