

Special Issue

Applications of XGBoost to Water Resource Problems

Message from the Guest Editors

Artificial intelligence (AI) and machine learning (ML) methods are applied in every field of research as they can provide alternative data-driven solutions. Among the available AI techniques, Extreme Gradient Boost (XGBoost) has been recently utilized as a novel data-driven technique to solve problems in the field of water resources. Due to the promising results of preliminary studies on applications of XGBoost in water resources, this Special Issue is devoted to the exploration of not only novel appraisals but also comparative assessments of this AI/ML model. We hope this Special Issue will attract and collect state-of-the-art investigations on the applicability of XGBoost as a prediction and/or classification tool in various fields of water resources research, including (but not limited to) hydrological processes, hydraulic engineering, river engineering, water supply and distribution networks, and climate change impact assessment. Finally, this Special Issue can be used as a reliable and up-to-date resource for researchers and readers interested in the interface between artificial intelligence and water resources.

Guest Editors

Dr. Majid Niazkar

Euro-Mediterranean Center on Climate Change, Ca' Foscari University of Venice, Via della Libertà, 12-30175 Venice, Italy

Dr. Andrea Menapace

Faculty of Science and Technology, Free University of Bozen-Bolzano, Piazza Università 5, 39100 Bolzano, Italy

Deadline for manuscript submissions

closed (20 March 2024)



Water

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 5.8



mdpi.com/si/170328

Water

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

[mdpi.com/journal/
water](https://mdpi.com/journal/water)





Water

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 5.8



[mdpi.com/journal/
water](https://mdpi.com/journal/water)



About the Journal

Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

Dr. Jean-Luc PROBST

Centre de Recherche sur la Biodiversité l'Environnement (CRBE) UMR
CNRS/UPS/INPT/IRD, Centre National de la Recherche Scientifique
(CNRS), University of Toulouse, Campus ENSAT, Auzeville Tolosane,
Toulouse, France

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), Ei Compendex, GEOBASE, GeoRef, PubAg, AGRIS, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Water Resources) / CiteScore - Q1 (Water Science and Technology)