

1. Record Nr.	UNINA9910682564603321
Autore	Ehteram Mohammad
Titolo	Application of Machine Learning Models in Agricultural and Meteorological Sciences / / by Mohammad Ehteram, Akram Seifi, Fatemeh Barzegari Banadkooki
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-19-9733-0
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (201 pages)
Disciplina	006.3
Soggetti	Machine learning Atmospheric science Subsistence farming Machine Learning Atmospheric Science Subsistence Agriculture Aprendentatge automàtic Intel·ligència artificial Agricultura Meteorologia Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	The importance of agricultural and meteorological predictions -- Structure of Particle swarm optimization -- Structure of Shark optimization algorithm -- structure of sunflower optimization algorithm -- Structure of Henry gas solubility optimizer.
Sommario/riassunto	This book is a comprehensive guide for agricultural and meteorological predictions. It presents advanced models for predicting target variables. The different details and conceptions in the modelling process are explained in this book. The models of the current book help better agriculture and irrigation management. The models of the current book are valuable for meteorological organizations. Meteorological and agricultural variables can be accurately estimated

with this book's advanced models. Modelers, researchers, farmers, students, and scholars can use the new optimization algorithms and evolutionary machine learning to better plan and manage agriculture fields. Water companies and universities can use this book to develop agricultural and meteorological sciences. The details of the modeling process are explained in this book for modelers. Also this book introduces new and advanced models for predicting hydrological variables. Predicting hydrological variables help water resource planning and management. These models can monitor droughts to avoid water shortage. And this content can be related to SDG6, clean water and sanitation. The book explains how modelers use evolutionary algorithms to develop machine learning models. The book presents the uncertainty concept in the modeling process. New methods are presented for comparing machine learning models in this book. Models presented in this book can be applied in different fields. Effective strategies are presented for agricultural and water management. The models presented in the book can be applied worldwide and used in any region of the world. The models of the current books are new and advanced. Also, the new optimization algorithms of the current book can be used for solving different and complex problems. This book can be used as a comprehensive handbook in the agricultural and meteorological sciences. This book explains the different levels of the modeling process for scholars.
