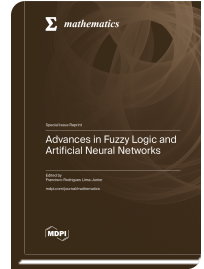*Special Issue Reprint*

Advances in Fuzzy Logic and Artificial Neural Networks

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Edited by
Francisco Rodrigues Lima-Junior

In a world where uncertainty and complexity dominate decision-making processes, *Advances in Neural Networks and Fuzzy Logic* presents groundbreaking studies exploring the potential of these Artificial Intelligence approaches to solve real-world problems. The chapters cover applications across various fields, such as robust galaxy classification, simulations in weighted finite automata, stock price prediction, large-scale water purification selection, speech deficiency detection in children, and supply chain management. Advanced techniques such as deep neural networks, fuzzy clustering, SHAP, LIME, and Hesitant Fuzzy Linguistic Term Sets are explored. This reprint is helpful for researchers, engineers, and students who wish to understand the latest advancements in and practical applications of neural networks and fuzzy logic. Within these pages, you will discover how these technologies solve complex problems and foster more transparent and reliable decision-support systems, as well as the state of the art in Artificial Intelligence, where neural networks and fuzzy logic converge to tackle modern challenges with innovation and precision.

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