Special Issue Reprint

Computational Intelligence and Machine Learning

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This Reprint brings together selected contributions from the Special Issue "Computational Intelligence and Machine Learning: Models and Applications", showcasing recent advances at the intersection of intelligent algorithms and real-world problem solving. The collected papers reflect the growing maturity of computational intelligence and machine learning as core technologies driving innovation across science, engineering, and society. This Reprint highlights methodological advances in distributed, semi-supervised, and weakly supervised learning, addressing challenges such as data uncertainty, decentralization, and limited labeling. It also presents application-driven studies showing how modern models adapt to domains including agriculture, cybersecurity, sports analytics, and document intelligence. Further emphasis is placed on human-centered AI, examining trust, interpretability, user behavior, and technology acceptance. By combining theoretical insights with domain-specific applications, this Reprint emphasizes a shift toward scalable, context-aware, and interpretable machine learning solutions. The contributions collectively illustrate current trends in computational intelligence, including multimodal learning, edge and distributed computing, and responsible AI design. This Reprint is intended for researchers, practitioners, and graduate students working in machine learning, data science, and applied artificial intelligence, as well as for readers interested in how advanced models translate into impactful applications across domains.

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