

Special Issue

The Synergistic Interaction of Artificial Intelligence and Digital Twin in the Sustainable Use of Natural Resources and Climate Change Solutions

Message from the Guest Editors

In urban planning and governance, DT technology has emerged as a critical tool for analyzing and optimizing urban systems. By creating virtual counterparts of physical infrastructures, transportation networks, and ecological systems, DTs allow urban planners and policymakers to model scenarios, assess intervention impacts, and identify effective solutions. When paired with AI, these systems facilitate the real-time tracking of urban activities, provide forecasts for urban growth patterns, and evaluate policies to enhance resilience and sustainability. Examples include mitigating urban heat islands, improving energy efficiency, and reducing carbon emissions. This Special Issue invites contributions that investigate the integration of AI and DT technologies in climate solutions, resource management, and sustainable urban planning. Submissions may include interdisciplinary research, innovative methodologies, and case studies, demonstrating the practical application of these technologies.

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