

Special Issue

Leveraging Artificial Intelligence, Knowledge Graphs and Multicriteria Approaches for Enhanced Decision-Making and Recommendation Systems

Message from the Guest Editors

Integrating AI, Knowledge Graphs (KGs), and Multi-Criteria Decision Making (MCDM) creates a powerful paradigm for intelligent, interpretable decision support. While AI extracts patterns and learns preferences, KGs provide structured, semantic context for complex entities. MCDM adds a rigorous framework to evaluate conflicting criteria and optimize trade-offs. Together, these technologies enhance the consistency, robustness, and transparency of recommendation systems in dynamic environments. This Special Issue invites theoretical and practical advances in AI-powered knowledge systems using multicriteria frameworks. Key topics include (but not limited to):

- KG integration with ML, DL, and graph-based learning.
- MCDM in AI-driven decision support and recommendation systems.
- Hybrid and group multicriteria optimization and modeling.
- Explainable AI (XAI) via structured and multicriteria reasoning.
- Context-aware, personalized, and hybrid recommender systems.
- Semantic reasoning and knowledge integration for decision support.
- Benchmarking AI, scalability of KGs, and real-time processing.
- Ethical AI: bias mitigation and transparency.

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