

15 Years of Knowledge Graphs: Lessons, Challenges, Opportunities

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Abstract. Machines with comprehensive knowledge of the world's entities and their relationships has been a long-standing vision and challenge of AI. Over the last 15 years, huge knowledge bases, also known as knowledge graphs, have been automatically constructed from web data and text sources, and have become a key asset for search, analytics, recommendations and data integration. This digital knowledge can be harnessed to semantically interpret textual phrases in news, social media and web tables, contributing to question answering, natural language processing and data analytics. This talk reviews these advances and discusses lessons learned. Moreover, it identifies open challenges and new research opportunities.

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