

1. Record Nr.	UNINA9910865249903321
Autore	Serles Umutcan
Titolo	An Introduction to Knowledge Graphs // by Umutcan Serles, Dieter Fensel
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	9783031452567 9783031452550
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (440 pages)
Altri autori (Persone)	FenselDieter
Disciplina	001.4226
Soggetti	Artificial intelligence Information storage and retrieval systems Expert systems (Computer science) Natural language processing (Computer science) Artificial Intelligence Information Storage and Retrieval Knowledge Based Systems Natural Language Processing (NLP)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Knowledge Technology in Context -- 2. Introduction -- 3. Information Retrieval and Hypertext -- 4. The Internet -- 5. The World Wide Web -- 6. Natural Language Processing -- 7. Semantic Web – Or AI Revisited -- 8. Databases -- 9. Web of Data -- 10. Knowledge Graphs -- Part II: Knowledge Representation -- 11. Introduction to Knowledge Representation -- 12. The Five Levels of Representing Knowledge -- 13. Epistemology -- 14. The Logical Level -- 15. Analysis of Schema.org at Five Levels of KR -- 16. Summary -- Part III: Knowledge Modeling -- 17. Introduction: The Overall Model -- 18. Knowledge Creation -- 19. Knowledge Hosting -- 20. Knowledge Assessment -- 21. Knowledge Cleaning -- 22. Knowledge Enrichment -- 23. Tooling and Knowledge Deployment -- 24. Summary -- Part IV: Applications -- 25. Applications.
Sommario/riassunto	This textbook introduces the theoretical foundations of technologies

essential for knowledge graphs. It also covers practical examples, applications and tools. Knowledge graphs are the most recent answer to the challenge of providing explicit knowledge about entities and their relationships by potentially integrating billions of facts from heterogeneous sources. The book is structured in four parts. For a start, Part I lays down the overall context of knowledge graph technology. Part II “Knowledge Representation” then provides a deep understanding of semantics as the technical core of knowledge graph technology. Semantics is covered from different perspectives, such as conceptual, epistemological and logical. Next, Part III “Knowledge Modelling” focuses on the building process of knowledge graphs. The book focuses on the phases of knowledge generation, knowledge hosting, knowledge assessment, knowledge cleaning, knowledge enrichment, and knowledge deployment to cover a complete life cycle for this process. Finally, Part IV (simply called “Applications”) presents various application areas in detail with concrete application examples as well as an outlook on additional trends that will emphasize the need for knowledge graphs even stronger. This textbook is intended for graduate courses covering knowledge graphs. Besides students in knowledge graph, Semantic Web, database, or information retrieval classes, also advanced software developers for Web applications or tools for Web data management will learn about the foundations and appropriate methods.
