1. Record Nr. UNISA996465462803316 Autore Liu Zhiyuan **Titolo** Representation Learning for Natural Language Processing [[electronic resource] /] / by Zhiyuan Liu, Yankai Lin, Maosong Sun Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2020 Pubbl/distr/stampa **ISBN** 981-15-5573-7 Edizione [1st ed. 2020.] 1 online resource (XXIV, 334 p. 131 illus., 99 illus. in color.) Descrizione fisica Disciplina 006.35 Soggetti Natural language processing (Computer science) Computational linguistics Artificial intelligence Data mining Natural Language Processing (NLP) Computational Linguistics Artificial Intelligence Data Mining and Knowledge Discovery Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1. Representation Learning and NLP -- 2. Word Representation -- 3. Compositional Semantics -- 4. Sentence Representation -- 5. Document Representation -- 6. Sememe Knowledge Representation --7. World Knowledge Representation -- 8. Network Representation -- 9. Cross-Modal Representation -- 10. Resources -- 11. Outlook. Sommario/riassunto This open access book provides an overview of the recent advances in representation learning theory, algorithms and applications for natural language processing (NLP). It is divided into three parts. Part I presents the representation learning techniques for multiple language entries, including words, phrases, sentences and documents. Part II then introduces the representation techniques for those objects that are closely related to NLP, including entity-based world knowledge, sememe-based linguistic knowledge, networks, and cross-modal entries. Lastly, Part III provides open resource tools for representation

learning techniques, and discusses the remaining challenges and future research directions. The theories and algorithms of representation

learning presented can also benefit other related domains such as machine learning, social network analysis, semantic Web, information retrieval, data mining and computational biology. This book is intended for advanced undergraduate and graduate students, post-doctoral fellows, researchers, lecturers, and industrial engineers, as well as anyone interested in representation learning and natural language processing.