1. Record Nr. UNINA9910410049103321

Titolo	Knowledge Engineering Tools and Techniques for AI Planning / / edited by Mauro Vallati, Diane Kitchin
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-38561-2
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (VIII, 277 p. 97 illus., 53 illus. in color.)
Disciplina	006.3
Soggetti	Expert systems (Computer science) Knowledge management Data mining Knowledge Based Systems Knowledge Management Data Mining and Knowledge Discovery
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface -- Part I: Knowledge Capture and Encoding -- 1. Explanation-based Learning of Action Models -- 2. Automated Domain Model Encoding tools for Planning -- 3. A Formal Knowledge Engineering Approach for Planning and Scheduling: Applications with itSIMPLE -- 4. MyPDDL: Tools for efficiently creating PDDL domains and problems -- 5. Planning.Domains: A Tool Suite for the Planning Researcher -- 6. Modelling Planning Tasks: Representation Matters -- Part II: Interaction, Visualisation, and Explanation -- 7. An Interactive Tool for Plan Generation, Inspection and Visualization -- 8. Interactive Visualization in Planning and Scheduling -- 9. Argument-based Plan Explanation -- 10. Interactive Planning-based Hypothesis Generation with LTS++ -- 11. Web Planner: A Tool to Develop, Visualize and Test Classical Planning Domains -- Part III: Case Studies and Applications -- 12. Design of Timeline-based Planning Systems for Safe Human-Robot Collaboration -- 13. Planning in a Real-world Application: An AUV Case Study -- 14. Knowledge Engineering and Planning for Social Human-Robot Interaction: A Case Study.-.

Sommario/riassunto

This book presents a comprehensive review for Knowledge Engineering tools and techniques that can be used in Artificial Intelligence Planning and Scheduling. KE tools can be used to aid in the acquisition of knowledge and in the construction of domain models, which this book will illustrate. AI planning engines require a domain model which captures knowledge about how a particular domain works - e.g. the objects it contains and the available actions that can be used. However, encoding a planning domain model is not a straightforward task - a domain expert may be needed for their insight into the domain but this information must then be encoded in a suitable representation language. The development of such domain models is both time-consuming and error-prone. Due to these challenges, researchers have developed a number of automated tools and techniques to aid in the capture and representation of knowledge. This book targets researchers and professionals working in knowledge engineering, artificial intelligence and software engineering. Advanced-level students studying AI will also be interested in this book.