Heuristic search [theory and applications /

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Elsevier/Morgan Kaufmann, 2012

Monografía

Search has been vital to artificial intelligence from the very beginning as a core technique in problem solving. The authors present a thorough overview of heuristic search with a balance of discussion between theoretical analysis and efficient implementation and application to real-world problems. Current developments in search such as pattern databases and search with efficient use of external memory and parallel processing units on main boards and graphics cards are detailed. Heuristic search as a problem solving tool is demonstrated in applications for puzzle solving, game playing, constraint satisfaction and machine learning. While no previous familiarity with heuristic search is necessary the reader should have a basic knowledge of algorithms, data structures, and calculus. Real-world case studies and chapter ending exercises help to create a full and realized picture of how search fits into the world of artificial intelligence and the one around us. Provides real-world success stories and case studies for heuristic search algorithms. Includes many AI developments not yet covered in textbooks such as pattern databases, symbolic search, and parallel processing units

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Título: Heuristic search Recurso electrónico] theory and applications Stefan Edelkamp, Stefan Schrödl

Editorial: Amsterdam Boston Elsevier/Morgan Kaufmann 2012

Descripción física: xxiv, 836 p. il

Mención de serie: EBSCO Academic eBook Collection Complete

Bibliografía: Incluye referencias bibliográficas e índice

Contenido: Heuristic search primer. Introduction -- Basic search algorithms -- Dictionary data structures -- Automatically created heuristics -- Heuristic search under memory constraints. Linear-space search -- Memory-restricted search -- Symbolic search -- External search -- Heuristic search under time constraints. Distributed search -- State space pruning -- Real-time search -- Heuristic search variants. Adversary search -- Constraint search -- Selective search -- Heurstic search applications. Action planning -- Automated system verification -- Vehicle navigation -- Computational biology -- Robotics

Detalles del sistema: Forma de acceso: World Wide Web

ISBN: 9780123725127 0123725127 9780080919737 0080919731 9780123725127 hardback ; acid-free paper) 0123725127 hardback ; acid-free paper)

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