Knowledge-Based Systems in Engineering

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Description
This book integrates the fundamentals of artificial intelligence (AI) approaches to knowledge representation with engineering examples. Its unified treatment makes it an essential tool in this emerging new field. Combining an informed approach to AI with engineering problem solving, this book is suitable for an introductory course on AI/expert systems which is specifically offered to engineers. The text provides an in-depth appreciation of the AI fundamentals underlying knowledge-based systems and covers rule-based, frame-based, and object-oriented representation with many engineering illustrations. Special Features include: discussions of emerging techniques, such as the methodology for integrating AI with CAD; implementation issues including knowledge acquisition, software and hardware issues, the system-building process, validation and testing of expert systems, and some sociological and legal aspects.

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