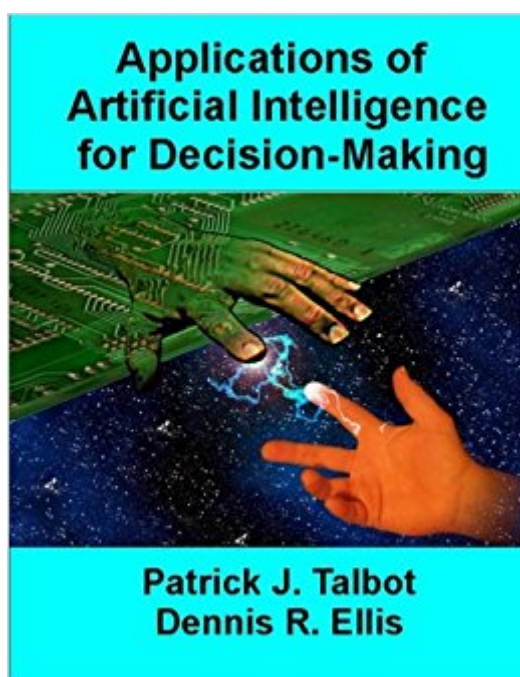The book was found

Applications Of Artificial Intelligence For Decision-Making: Multi-Strategy Reasoning Under Uncertainty

Applications of Artificial Intelligence for Decision-Making

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Dennis R. Ellis

Synopsis

Book Description: We have the data! Too much data! Decision-making requires that data be filtered and refined to provide information. Adding context to the content produces actionable knowledge. Unfortunately, current techniques strip away the uncertainty associated with the raw data. This book provides a decision-centered approach for coping with uncertainty that combines what people do best with what computers do best. Algorithms Ã¢â ¬Å"plug intoÃ¢â ¬Â•the knowledge base from a single import/export interface, facilitating multi-strategy reasoning. Triage filters the data, extraction of hedge words capture uncertainty, an executable knowledge base provides content in context, data fusion propagates uncertainty, data analytics discover patterns, and plan optimization tools move the decision-maker from Ã¢â ¬Å"what's going onÃ¢â ¬Â• to Ã¢â ¬Å"what to doÃ¢â ¬Â•. Displays present actionable knowledge with associated uncertainties explicitly shown. Fifteen applications are shown ranging from longevity prediction, to a retail problem solver, to intelligence community applications, to starship cybernetics. We wrote the book to provide the practitioner with compelling ideas for orchestrating artificial intelligence, statistical, and mathematical algorithms to produce fully integrated decision support systems. Novel techniques of particular interest are: a knowledge representation that provides a unifying framework for multi-strategy reasoning and simulation, a robust treatment of uncertainty, monitor-assess-plan-execute decision loops for routine and quick-reaction decisions, eight techniques for automated discovery of unknown unknowns, level 4 (process refinement) data fusion, and a self-aware knowledge base that Ã¢â ¬Å"knows what it knows".

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Customer Reviews

Patrick Talbot was the Chief Technologist for the Northrop Grumman Space Systems Organization when he retired in 2011. His 40 years of experience focused on military command-and-control, climate change, computer network defense, and intelligence community applications, leading to six patents and software solutions for multi-strategy reasoning under uncertainty. In the last few years. He has six patents. Patrick Talbot has received awards in idea generation contests sponsored by crowd sourcing companies Dennis Ellis was a Senior Researcher at Northrop Grumman and Senior Systems Analyst at Cray Research with nearly 40 years of extensive experience in supercomputing, space operations, and military command-and-control. His areas of expertise include Systems Engineering, Software Development, Benchmarking, Marketing, Operating System Development, Weather/Climate Change applications, and Computer Architecture. He is familiar with Fortran, Basic, C/C++, Java, Pascal, and several other languages. He has three patents and published papers on artificial intelligence.

Clearly written and well-organized bookÃƒÂ¢Ã â ¬Ã Â|It is a perfect blend of fundamentals, methodology and application of decision support frameworks, belief networks and computer reasoning to support decision-making.

What a great book. Well written and easy to understand. I highly recommend the book.

Great book. Patrick clearly explains tough topics.

Very well laid out and packed with useful information

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