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Autore	Brown Barclay R.
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Sommario/riassunto

Engineering Intelligent Systems Exploring the three key disciplines of intelligent systems As artificial intelligence (AI) and machine learning technology continue to develop and find new applications, advances in this field have generally been focused on the development of isolated software data analysis systems or of control systems for robots and other devices. By applying model-based systems engineering to AI, however, engineers can design complex systems that rely on AI-based components, resulting in larger, more complex intelligent systems that successfully integrate humans and AI. Engineering Intelligent Systems relies on Dr. Barclay R. Brown's 25 years of experience in software and systems engineering to propose an integrated perspective to the challenges and opportunities in the use of artificial intelligence to create better technological and business systems. While most recent research on the topic has focused on adapting and improving algorithms and devices, this book puts forth the innovative idea of transforming the systems in our lives, our societies, and our businesses into intelligent systems. At its heart, this book is about how to combine systems engineering and systems thinking with the newest technologies to design increasingly intelligent systems. Engineering Intelligent Systems readers will also find: An introduction to the fields of artificial intelligence with machine learning, model-based systems engineering (MBSE), and systems thinking--the key disciplines for making systems smarter An example of how to build a deep neural network in a spreadsheet, with no code or specialized mathematics required An approach to the visual representation of systems, using techniques from moviemaking, storytelling, visual systems design, and model-based systems engineering An analysis of the potential ability of computers to think, understand and become conscious and its

implications for artificial intelligence Tools to allow for easier collaboration and communication among developers and engineers, allowing for better understanding between stakeholders, and creating a faster development cycle A systems thinking approach to people systems--systems that consist only of people and which form the basis for our organizations, communities and society Engineering Intelligent Systems offers an intriguing new approach to making systems more intelligent using artificial intelligence, machine learning, systems thinking, and system modeling and therefore will be of interest to all engineers and business professionals, particularly systems engineers.
