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Sommario/riassunto

This book is a comprehensive and cutting-edge exploration of the complexities surrounding the protection and resilience of cyber-physical systems. It delves into the critical interplay between physical components and computer systems in various domains, such as transportation, health care, manufacturing, and energy systems. The technical content of the book is divided into multiple sections, each meticulously crafted to address the key challenges and methodologies relevant to securing cyber-physical systems. The book examines the current state-of-the-art in cyber-physical systems security, showcasing the latest research findings and theoretical discussions. Key topics include the integration of technologies like IoT, AI, machine learning, and embedded systems within cyber-physical systems, and how security considerations can be effectively woven into these technologies. By adopting a multi-disciplinary approach, this book provides readers with an encompassing view of the subject matter, ensuring that both technical specialists and professionals from diverse backgrounds can benefit from its insights. The book includes practical applications and real-world case studies to illustrate how security methods and models can be successfully deployed in various scenarios. By bridging the gap between theory and practice, this book equips the readers with invaluable tools to address security challenges effectively, ensuring the resilience and reliability of the cyber-physical systems of the future.