1. Record Nr. UNINA9910254812803321

Autore	Yan Wei Qi
Titolo	Introduction to Intelligent Surveillance : Surveillance Data Capture, Transmission, and Analytics / / by Wei Qi Yan
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-60228-4
Edizione	[2nd ed. 2017.]
Descrizione fisica	1 online resource (XIII, 191 p. 88 illus., 72 illus. in color.)
Disciplina	621.38928
Soggetti	Pattern perception Computer networks Pattern Recognition Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Surveillance Data Capturing and Compression -- Surveillance Data Secure Transmissions -- Surveillance Data Analytics -- Biometrics for Surveillance -- Visual Event Computing I -- Visual Event Computing II -- Surveillance Alarm Making -- Surveillance Computing.
Sommario/riassunto	This accessible textbook/reference reviews the fundamental concepts and practical issues involved in designing digital surveillance systems that fully exploit the power of intelligent computing techniques. The book presents comprehensive coverage of all aspects of such systems, from camera calibration and data capture, to the secure transmission of surveillance data. In addition to the detection and recognition of objects and biometric features, the text also examines the automated observation of surveillance events, and how this can be enhanced through the use of deep learning methods and supercomputing technology. This updated new edition features extended coverage on face detection, pedestrian detection and privacy preservation for intelligent surveillance. Topics and features: Contains review questions and exercises in every chapter, together with a glossary Describes the essentials of implementing an intelligent surveillance system and analyzing surveillance data, including a range of biometric

characteristics Examines the importance of network security and digital forensics in the communication of surveillance data, as well as issues of issues of privacy and ethics Discusses the Viola-Jones object detection method, and the HOG algorithm for pedestrian and human behavior recognition Reviews the use of artificial intelligence for automated monitoring of surveillance events, and decision-making approaches to determine the need for human intervention Presents a case study on a system that triggers an alarm when a vehicle fails to stop at a red light, and identifies the vehicle's license plate number Investigates the use of cutting-edge supercomputing technologies for digital surveillance, such as FPGA, GPU and parallel computing This concise, classroom-tested textbook is ideal for undergraduate and postgraduate-level courses on intelligent surveillance. Researchers interested in entering this area will also find the book suitable as a helpful self-study reference. Dr. Wei Qi Yan is an Associate Professor in the Department of Computer Science at Auckland University of Technology, New Zealand. His other publications include the Springer title Visual Cryptography for Image Processing and Security.