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Altri autori (Persone)	JainAnil K DengJiankang
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Nota di contenuto	Part I: Introduction and Background -- 1. Overview on Face recognition -- 2. Historical Developments and Challenges -- 3. Applications -- Part II: Fundamentals of Deep Neural Networks -- 4. Overview on Deep Learning for FR -- 5. Deep Neural Network Architecture Design -- 6. Loss Function Design -- 7. Auto-Encoders -- 8. Convolutional Neural Networks -- 9. Generative Adversarial Networks -- 10. Transfer Learning and Domain Adaptation -- 11. Deep Learning with Big/Small

Data -- 12. Model Compression and Speedup -- 13. Programming Platforms for Deep Learning -- Part III: Face Recognition by Deep Neural Networks -- 14. Overview on Face Recognition Methods -- 15. Preprocessing Methods -- 16. Face Localization Detection -- 17. Face Localization Landmark -- 18. Visual Face Recognition -- 19. Multispectral Face Recognition -- 20. Fusion for Face Recognition.

Sommario/riassunto

The history of computer-aided face recognition dates to the 1960s, yet the problem of automatic face recognition – a task that humans perform routinely and effortlessly in our daily lives – still poses great challenges, especially in unconstrained conditions. This highly anticipated new edition provides a comprehensive account of face recognition research and technology, spanning the full range of topics needed for designing operational recognition systems. After a thorough introduction, each subsequent chapter focuses on a specific topic, reviewing background information, up-to-date techniques, and recent results, as well as offering challenges and future directions. Topics and features: Fully updated, revised, and expanded, covering the entire spectrum of concepts, methods, and algorithms for automated detection and recognition systems Provides comprehensive coverage of face detection, alignment, feature extraction, and recognitiontechnologies, and issues in evaluation, systems, security, and applications Contains numerous step-by-step algorithms Describes a broad range of applications from person verification, surveillance, and security, to entertainment Presents contributions from an international selection of preeminent experts Integrates numerous supporting graphs, tables, charts, and performance data This practical and authoritative reference is an essential resource for researchers, professionals and students involved in image processing, computer vision, biometrics, security, Internet, mobile devices, human-computer interface, E-services, computer graphics and animation, and the computer game industry. Dr. Stan Z. Li is Chair Professor of Artificial Intelligence at Westlake University, Hangzhou, China. His Springer titles include Encyclopedia of Biometrics (with Dr. Jain) and Handbook of Remote Biometrics, among others. Dr. Anil K. Jain is a University Distinguished Professor in the Department of Computer Science and Engineering at Michigan State University, USA. His Springer titles include Introduction to Biometrics and Handbook of Fingerprint Recognition, among others. Jiankang Deng is a researcher and honorary lecturer at the Department of Computing, Imperial College London, UK. He is one of the main contributors to the widely used open-source platform Insight face.