1. Record Nr. UNINA9910373924303321

Titolo	Domain Adaptation for Visual Understanding / / edited by Richa Singh, Mayank Vatsa, Vishal M. Patel, Nalini Ratha
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	9783030306717 3030306712
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (X, 144 p. 62 illus., 56 illus. in color.)
Disciplina	006.6869
Soggetti	Computer vision Artificial intelligence Computational intelligence Computer Vision Artificial Intelligence Computational Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Domain Adaptation for Visual Understanding -- M-ADDA: Unsupervised Domain Adaptation with Deep Metric Learning -- XGAN: Unsupervised Image-to-Image Translation for Many-to-Many Mappings -- Improving Transferability of Deep Neural Networks -- Cross Modality Video Segment Retrieval with Ensemble Learning -- On Minimum Discrepancy Estimation for Deep Domain Adaptation -- Multi-Modal Conditional Feature Enhancement for Facial Action Unit Recognition -- Intuition Learning -- Alleviating Tracking Model Degradation Using Interpolation-Based Progressive Updating.
Sommario/riassunto	This unique volume reviews the latest advances in domain adaptation in the training of machine learning algorithms for visual understanding, offering valuable insights from an international selection of experts in the field. The text presents a diverse selection of novel techniques, covering applications of object recognition, face recognition, and action and event recognition. Topics and features: Reviews the domain adaptation-based machine learning algorithms available for visual

understanding, and provides a deep metric learning approach Introduces a novel unsupervised method for image-to-image translation, and a video segment retrieval model that utilizes ensemble learning Proposes a unique way to determine which dataset is most useful in the base training, in order to improve the transferability of deep neural networks Describes a quantitative method for estimating the discrepancy between the source and target data to enhance image classification performance Presents a technique for multi-modal fusion that enhances facial action recognition, and a framework for intuition learning in domain adaptation Examines an original interpolation-based approach to address the issue of tracking model degradation in correlation filter-based methods This authoritative work will serve as an invaluable reference for researchers and practitioners interested in machine learning-based visual recognition and understanding. Dr. Richa Singh is a Professor at Indraprastha Institute of Information Technology, Delhi, India. Dr. Mayank Vatsa is a Professor at the same institution. Dr. Vishal M. Patel is an Assistant Professor in the Department of Electrical and Computer Engineering at Johns Hopkins University, Baltimore, MD, USA. Dr. Nalini Ratha is a Research Staff Member at the IBM Thomas J. Watson Research Center, Yorktown Heights, NY, USA.