1. Record Nr. UNINA9910255008303321

Titolo	Large-Scale Visual Geo-Localization / / edited by Amir R. Zamir, Asaad Hakeem, Luc Van Gool, Mubarak Shah, Richard Szeliski
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-25781-1
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XI, 351 p. 152 illus., 7 illus. in color.)
Collana	Advances in Computer Vision and Pattern Recognition, , 2191-6586
Disciplina	910.285
Soggetti	Optical data processing Artificial intelligence Geographical information systems Pattern recognition Image Processing and Computer Vision Artificial Intelligence Geographical Information Systems/Cartography Pattern Recognition
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction to Large Scale Visual Geo-Localization -- Part I: Data-Driven Geo-Localization -- Discovering Mid-Level Visual Connections in Space and Time -- Where the Photos Were Taken: Location Prediction by Learning from Flickr Photos -- Cross-View Image Geo-Localization -- Ultra-Wide Baseline Facade Matching for Geo-Localization -- Part II: Semantic Reasoning-Based Geo-Localization -- Semantically Guided Geo-Localization and Modeling in Urban Environments -- Recognizing Landmarks in Large-Scale Social Image Collections -- Part III: Geometric Matching-Based Geo-Localization -- Worldwide Pose Estimation Using 3D Point Clouds -- Exploiting Spatial and Co-Visibility Relations for Image-Based Localization -- 3D Point Cloud Reduction Using Mixed-Integer Quadratic Programming -- Image-Based Large-Scale Geo-Localization in Mountainous Regions -- Adaptive Rendering for Large-Scale Skyline Characterization and Matching -- User-Aided

Geo-Localization of Untagged Desert Imagery -- Visual Geo-Localization of Non-Photographic Depictions via 2D-3D Alignment -- Part IV: Real-World Applications -- A Memory Efficient Discriminative Approach for Location-Aided Recognition -- A Real-World System for Image/Video Geo-Localization -- Photo Recall: Using the Internet to Label Your Photos.

Sommario/riassunto

This timely and authoritative volume explores the bidirectional relationship between images and locations. The text presents a comprehensive review of the state of the art in large-scale visual geo-localization, and discusses the emerging trends in this area. Valuable insights are supplied by a pre-eminent selection of experts in the field, into a varied range of real-world applications of geo-localization. Topics and features: Discusses the latest methods to exploit internet-scale image databases for devising geographically rich features and geo-localizing query images at different scales Investigates geo-localization techniques that are built upon high-level and semantic cues Describes methods that perform precise localization by geometrically aligning the query image against a 3D model Reviews techniques that accomplish image understanding assisted by the geo-location, as well as several approaches for geo-localization under practical, real-world settings Presents contributions from the leading and most active researchers in the field from both academia and industry This invaluable text/reference is a must-read for all researchers interested in developing automatic methods for image geo-localization, whether for commercial, academic, or military domains. Professionals involved in computer vision, computer graphics, photogrammetry, computational optimization, geographic information systems, and other related disciplines, will also benefit from the detailed coverage of this emerging field.