

Preface

With the advent of the social media era, technologies for social computing have become prevalent. This book provides a unique view of applying human-centered computing in the social media scenario, especially classification and recognition of attributes, demographics, contexts, and correlations of human information among unconstrained visual data from the social media domain. These cues are utilized for inferring people's social status, relationships, preferences, intentions, personalities, needs, networking and lifestyles, etc. Understanding of humans in social media will play an important role in many real-world applications with both academic and industrial values and broad impacts.

As a professional textbook and research monograph, this book comprises 10 chapters covering multiple emerging topics in this new interdisciplinary field, which links popular research fields of Face Recognition, Human-Centered Computing, Social Media, Image Processing, Pattern Recognition, Computer Vision, Big Data, and Human-Computer Interaction. Contributed by experts and practitioners from both academia and industry, these chapters complement each other from different angles and compose a solid overview of the human-centered social media analytics. Well-balanced contents for both theoretical analysis and real-world applications will benefit readers of different levels of expertise, help them to quickly gain the knowledge of fundamentals, and further inspire them toward insightful understanding. This book may be used as an excellent reference for researchers or as a major textbook for graduate student courses requiring minimal undergraduate prerequisites at academic institutions.

The content is divided into two parts of topics. The first five chapters are on Social Relationships in Human-Centered Media, while the last five chapters are on Human Attributes in Social Media Analytics. [Chapter 1](#) provides an introduction to social relationship in the social media context, and describes how to bridge human-centered social media content across web domains; [Chap. 2](#) presents a method for social relationships in media analytics, in particular, features, models, and analytics for learning social relations from videos; [Chap. 3](#) discusses understanding social relationships in social networks. A method of community understanding in location-based social networks is presented; [Chap. 4](#) describes the social relationship in social roles, especially social role recognition for human event understanding; [Chap. 5](#) presents how to classify social relationships in human-object interactions through integrating randomization and discrimination;

[Chap. 6](#) introduces a method to construct people recognition in social media through social context; [Chap. 7](#) presents an example of demographic sensing in social media for female facial beauty attribute recognition and editing; [Chap. 8](#) demonstrates face age estimation in social media from a data representation perspective; [Chap. 9](#) presents methodologies of kin relationship and identity recognition and understanding from group photos in social media; [Chap. 10](#) presents the application of a probabilistic model under social context to occupation recognition and profession prediction.

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