

Contents

1	Introduction	1
1.1	Social Multimedia Computing	1
1.2	Challenges and Progresses	4
1.3	User-Centric Social Multimedia Computing	6
1.4	Overview of the Book	7
	References	8
2	User-Perceptive Multimedia Content Analysis	11
2.1	Introduction	11
2.2	Related Work	13
2.2.1	Multimedia Content Analysis	13
2.2.2	Social Image Tag Refinement	15
2.3	Methods for Social Image Tag Refinement	16
2.3.1	Ranking-Based Optimization Scheme	18
2.3.2	Multicorrelation Smoothness Constraints	21
2.3.3	Optimization and Parameter Learning Algorithms	23
2.4	Performance Evaluation	24
2.4.1	Dataset	24
2.4.2	Parameter Settings	25
2.4.3	Performance Comparison	26
2.4.4	Case Studies	28
2.5	Discussions	30
	References	30
3	User Modeling on Social Multimedia Activity	33
3.1	Introduction	33
3.2	Related Work	36
3.3	Relational User Attribute Inference Problem Formulation	38

- 3.4 Methods for Relational User Attribute Inference 41
 - 3.4.1 User Feature Extraction 41
 - 3.4.2 Stack SVM-Based User Attribute Inference 42
 - 3.4.3 Exploring Attribute Relation for User Attribute Inference. 42
- 3.5 Applications of Relational User Attribute Inference 46
 - 3.5.1 User Profiling 47
 - 3.5.2 Attribute-Based User Retrieval 47
- 3.6 Performance Evaluation 48
 - 3.6.1 Experimental Setting 48
 - 3.6.2 Experimental Results and Analysis 49
- 3.7 Discussions 53
- References 54

- 4 Personalized Multimedia Search 57**
 - 4.1 Introduction 57
 - 4.2 Related Work 58
 - 4.3 Topic-Level User and Multimedia Content Modeling 59
 - 4.3.1 Data Justification and Assumption 60
 - 4.3.2 Multimodal Topic-Sensitive Influence Model 62
 - 4.3.3 Learning MmTIM by Gibbs Sampling 63
 - 4.3.4 Parameter Estimation 64
 - 4.4 General Framework for Personalized Image Search 65
 - 4.4.1 Risk Minimization Framework 65
 - 4.4.2 Query and Image Language Models. 68
 - 4.5 Performance Evaluation 69
 - 4.5.1 Dataset. 69
 - 4.5.2 Topic-Sensitive Influencer Mining Evaluation 70
 - 4.5.3 Personalized Image Search Evaluation 74
 - 4.6 Discussions 77
 - 4.6.1 Understanding Influence in Different Fields 77
 - 4.6.2 Methodological Contribution. 77
 - 4.6.3 Potential Extensions. 77
- References 78

- 5 Cross-Network Social Multimedia Computing 81**
 - 5.1 Introduction 81
 - 5.2 Related Work 83
 - 5.2.1 Macro Cross-Network Analysis. 83
 - 5.2.2 Micro Cross-Network Analysis 84
 - 5.3 On User: Cross-Network User Modeling. 85
 - 5.3.1 Data Analysis 86

- 5.3.2 YouTube Video Recommendation 88
- 5.4 From User: Cross-Network Knowledge Association Mining 91
 - 5.4.1 Topic Discovery 92
 - 5.4.2 Topic Association 94
 - 5.4.3 Cross-Network Application. 95
- 5.5 Discussions 97
- References 97

- 6 Conclusion 101**
 - 6.1 Promising Topics 101
 - 6.2 The Prospects 102

- Appendix 105**



<http://www.springer.com/978-3-662-44670-6>

User-centric Social Multimedia Computing

Sang, J.

2014, XV, 108 p. 90 illus. in color., Hardcover

ISBN: 978-3-662-44670-6