

Preface

This book is a timely collection of 12 chapters that present the state of the art in various aspects of social search and recommendation systems. Within the broader context of social network analysis, it focuses on important and upcoming topics of social search and recommendation systems. We believe that the book is a coherent collection of chapters which is not easily accomplished in edited volumes.

Many of the chapters are expanded versions of the best papers presented in the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM'2013), which was held in Niagara Falls, Canada in August 2013. The papers were selected based on the reviews for the conference and then were improved substantially by the authors. In addition to the selected papers, the book also features invited chapters in the field of social search and recommendation systems.

The first chapter, by Xinyue Wang, Laurissa Tokarchuk, Felix Cuadrado and Stefan Poslad, presents an adaptive crawling model to detect emerging popular topics, by searching for highly correlated data for the events of interest. In the next chapter, Yuki Urabe, Rafal Rzepka, and Kenji Araki propose an emoticon recommendation system based on users' emotional statements and evaluate its performance in comparison to other such recommendation systems. Then, Georgios Alexandridis, Giorgos Siolas, and Andreas Stafylopatis present a novel random walk social recommendation approach based on rejection sampling.

In "[Social Network Derived Credibility](#)," Erica Briscoe, Darren Appling and Heather Hayes explore the use of social network properties as a basis for determining credibility. In the next chapter, Benjamin C.M. Fung, Yan'An Jin, Jiaming Li, and Junqiang Liu propose a method to anonymize the social network with the goals of hiding the identities of the participants and preserving the frequent sharing patterns within a community. In the following chapter, Cheng Chen, Kui Wu, Venkatesh Srinivasan, and Xudong Zhang present a new detection mechanism, using both semantic and nonsemantic analysis, to identify a special group of online users, called hidden paid posters.

In their work, Sogol Naseri, Arash Bahrehmand, and Chen Ding strive to enhance recommendation accuracy through the use of a new similarity metric

which is based on social tagging information. They also present a recommendation method that applies user similarity for finding the most interesting items to target user's taste. Ali Khodaei, Cyrus Shahabi, and Sina Sohangir propose a new model, called persocial relevance model utilizing social signals to improve the web search, in their chapter titled "[Personalization of Web Search Using Social Signals](#)". Linhong Zhu, Sheng Gao, Sinno Jialin Pan, Haizhou Li, Dingxiong Deng, and Cyrus Shahabi provide a formulation for the informative sentence selection problem in opinion summarization as a community leader detection problem. Then, they present new algorithms to identify communities and leaders.

The chapter by Hasan Shahid Ferdous, Mashrura Tasnim, Saif Ahmed, and Md. Tanvir Alam Anik explores differences in searching habits of the social networking sites in different regions of the world based on their level of economic development. In "[Evolutionary Influence Maximization in Viral Marketing](#)", Sanket Naik and Qi Yu propose a new framework to effectively apply viral marketing in a dynamic social network. The last chapter by Alessia Amelio presents an investigation of the voting behavior of the Italian Parliament by employing methods in data mining and network analysis fields.

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