

Book Review

Probabilistic Approaches to Recommendations

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Morgan & Claypool Publishers. UK

www.morganclaypool.com

ISBN: 9781627052573

The significance of the recommender systems has been outlined in very large number of texts and literature. The challenges in the recommender systems are wide and they are addressed in many texts out of which this current premier is designed to provide a good outlook on the issues.

This book has seven chapters with appendices and extensive bibliography. The first chapter on recommendation process provides a focus on the fundamental concepts including the formal framework of recommender system, evaluation and challenges. The second chapter introduces the various probabilistic models for collaborative filtering. Mixture modelling is important in the probability modelling and it is focused in this unit.

Authors in this chapter first used the description of the maximum likelihood estimation and its impact on Bayesian modelling. The parameters description and the algorithms associated with the models are adequately explained here. The structure of the proposed models leads the users to gain a real understanding of the probabilistic approaches.

The chapter four is the crux of the book that explains the probabilistic models in detail. Blocks and pattern discovery are further described with good supporting illustrations. The context features and sequence modelling forms the fifth chapter.

The social recommender systems have their influence in the last few years because of the growth of the web and its impact. Social networks and their topologies are used to explain the social recommender systems. The last chapter on conclusion mainly consists of the challenges. The authors have identified the technological as well as the application-specific challenges in this final chapter.

The appendices describe the Maximization algorithm, variational inference and Gibbs sampling. As the authors claimed this book can be used as a good tool to understand the real world challenges and applications on probabilistic recommendations.

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