



Data Warehousing and Data Mining

Deepali Kamthania

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About the Book

The companies have huge amount of data and have realized that the information accumulated over the years is an important strategic asset. There is potential business intelligence hidden in large volumes of data. Some of these tools and techniques include data warehousing, online analytical processing (OLAP) and data mining. Data warehouses include consolidated data from a variety of sources, as well as summary information for a lengthy period of time. Data mining deals with exploration techniques based on advanced methods and tools for handling large amount of data. Many data mining approaches are intertwined with machine learning and statistics in some way.

Divided in two sections, this book is organized in 15 chapters. The first section covers data warehousing concepts and the steps required in creating a data warehouse for a decision support system along with data warehouse implementation case study. The second section provides a comprehensive introduction to data mining and is designed to be accessible and useful to students, instructors, researchers and professionals. It includes data preprocessing, visualization, predictive modeling, association analysis, clustering, and anomaly detection. **The goal is to present fundamental concepts and algorithms for each topic, thus providing reader with the necessary background for the application of data mining to the real problems.**

Important concepts of data warehousing and data mining.

Solved numerical problems and case studies. The exercises have been provided at the end of every chapter.

Chapters are organized into the following sections: Objectives, Theory and examples, Summary and Solved Problems.

Summary at the end of the chapter

Long and short answer type questions at the end of each chapter

Tables and figures for better illustration

Solutions to numerical problems.

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About the Author

Deepali Kamthania :- has more than 19 years of experience in academics and IT industry. Presently she is Professor, School of Information Technology, VIPS, Delhi. She has received B.Sc. (Hons.) and MCA degrees from Aligarh Muslim University (AMU), Aligarh and Ph.D. from Indian Institute of Technology (IIT), Delhi. Her areas of interest include machine learning and hybrid photovoltaic systems. She has published over 90 research papers in reputed national and international conferences and journals including *SCI*, *Web of Science and Scopus* along with various magazine articles and two books. She has attended and organized many workshops, guest lectures, and seminars. She has delivered many technical talks and chaired sessions at various academic forums. She serves as editorial board member/reviewer of various refereed journals. She is guiding Ph.D. scholars and is actively involved in various research projects. She has been actively involved in designing course curriculum for BCA and MCA. She has received Merit scholarship in B.Sc. and Bharat Seva Scholarship in MCA. She is the recipient of Academic Excellence Awards, Best Paper Award in 2021, 2020 and 2019, Best Teacher Award in 2018 and 2019, Active Participation Award (Woman) in 2016-17 from Computer Society of India and Institution of Engineering Technology Awards in 2013 and 2014 for significant contribution to the IT field. She is a life time member of IEEE, CSI and ISTE.