Preface

This book presents recent investigations and enhancements in the field of Decision Support Systems, Web Data Mining, web engineering, with specific emphasis on development of Decision Support Systems based on web applications. Today, web is a major information resource and is becoming an obvious automated tool in various applications. Due to increased growth and popularity of WWW, one needs to be very cautious in designing the website as per standard and norms. An estimated 90% of websites from projected growth of 196 million websites severely suffered with usability and accessibility issues. Web Engineering must be explored in a systematic, disciplined way for development, operation and maintenance of web based applications using certain guidelines. The data on World Wide Web are available in three different formats: web content, web structure and web usage. Web mining is usually defined as the use of data mining techniques to automatically discover and extract information from web documents and services. Web mining is the application of data mining techniques to extract knowledge from web data, i.e. web content, web structure, and web usage data. A decision support system is a computer-based information system that supports business and organizational decision-making activities.

The book comprises of the ideas of various researchers, scholars, website design experts and others to develop and evaluate decision support systems based on web data mining. Web Data Mining focuses on Web content which includes text, HTML pages, images, audio, videos etc. Also Web Data Mining investigates the linkages and relationships among web pages based on website structure. Further Web Data Mining extracts web data by web server to track various types of transactions through website and web usage is mainly focuses for decision making. The book is organized in five sections that cover the main concepts and studies for the development of decision support system through web data mining. The Section 1 consists of chapters which describe the development of decision support systems. The Section 2 deals with development of web mining systems. The Section 3 covers details about the development of knowledge based systems from web mining process. The Section 4 provides research insights of various authors about mining aspects of social media, graph mining techniques and aspects of social network web mining. Finally, Section 5 introduces the importance of data mining and text mining aspects of various authors’ contributions. The present book is an attempt to investigate various solutions for the development of decision support systems through web data mining. In this book, all areas of web data mining, decision support systems, knowledge based systems, social media mining and text mining are thoroughly discussed for finding desired solutions for the web data mining and the development of decision support systems for knowledge representation. The book is a step forward towards presenting recent studies for decision support systems and web data mining and serves the purpose for the present trend in web engineering. Hence the book focuses important aspects of web designing process to improve the business intelligence through web mining.