PREFACE

There is no escaping the fact that analytics is big right now. It seems that every organization from sports teams to huge banking enterprises has someone in the organization "doing" analytics. Bestselling authors such as Thomas Davenport have written books on how companies are using analytics to give them competitive advantage and universities are beginning to offer degree programs on the subject at both the graduate and undergraduate level. Textbooks are beginning to appear on the subject although there is not yet any consensus on what topics should be covered. Books written from a MIS point of view focus mainly on "big data" topics such as data mining. Texts written from a Statistical point of view cover primarily traditional statistical topics with a couple of extra chapters on other analytical techniques. The books available also differ widely in terms of their technical content. Some delve into the technical aspects of the algorithms and others try to cover up all of those details. This text tries to provide a balance between the two. We will attempt to provide an overview of most of the analytical techniques in use today but not all of the gory details. Our philosophy is that managers need to understand enough details about the assumptions and working of the techniques to be able to judge the quality of the analytical reports presented to them but no more. Our emphasis is on understanding the major assumptions of the methods covered and interpretation of the results within the context of organizational decision making. This book is not for those interested in all of the interior workings of the algorithms. For example, managers need to know the assumptions underlying a segmentation analysis of their online customers but they don't need to know how to write a routine to perform cluster analysis.

Most analytical methods require a computer and there are a variety of analytical software packages on the market. However, all of these software packages have a learning curve, some steeper than others. These packages are also usually quite expensive. Therefore, I have chosen to illustrate most of the techniques within the more familiar Microsoft Excel environment that is readily available to all students and managers. Some simple concepts can be illustrated with basic Excel functions. More complex methods will be illustrated with a special Excel add-in that accompanies the text called XLAnalyst. That way users of the text can focus on the assumptions and results of the techniques within a familiar environment without having to learn complex new software.

For some topics, data mining in particular, more sophisticated software is necessary. For these topics two software packages, WEKA and RapidMiner, are used. Both of these packages are available at no cost to students. Special thanks go to RapidMiner for making their software available to the author and being so supportive of this project.

We have also intentionally done everything we could to keep the costs to students to a minimum. Part of this effort is the provision of free software. The other aspect is in making this text an e-book which keeps the costs to the students at a minimum. We will also host a website and provide support for the XLAnalyst add-in to help students with any problems with the text or software. We hope to make you use of this text a pleasant experience.

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January 25, 2023

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