

# Data mining techniques in CRM: Inside customer segmentation

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## BOOK REVIEW

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Tsiptsis, K. & Chorianopoulos, A. 2009. *Data mining techniques in CRM: Inside customer segmentation*. New York: John Wiley & Sons.

**Keywords-** Data mining, CRM, Market segmentation, IBM Modeler

The increased access to large data bases containing information on customer transactions and characteristics offers a major opportunity for marketers. It is possible to explore these data and discover customer buying patterns and use this information to make effective marketing decisions. This book presents an overview of the methods that are used in the data mining process. The work is positioned as offering a reasonably comprehensive overview of the topic for the non-specialist. The mathematical requirements are a knowledge of basic statistics. The bulk of the text presents analytical techniques in clear prose with a minimum of equations.

The first chapter examines the role of data mining in CRM with an overview of predictive and unsupervised models and the contribution that data mining can make in market segmentation and direct marketing. It includes a section on the steps that a successful data mining project should follow.

Chapter two contains a discussion of the major types of predictive modeling techniques such as regression analysis and a detailed discussion on decision trees for classification purposes. This is quite useful as decision trees are relatively new and not widely used as their power and flexibility are not completely appreciated. The chapter also presents

unsupervised modeling techniques such as the major methods for cluster analysis which are useful for discovering clusters of customers and, hopefully, market segments. The remaining material concerns methods for discovering event sequences.

Chapter three deals with data mining techniques useful for market segmentation. The presentation is detailed and builds on the analysis of a telecom database using a commercial data mining package (IBM SPSS Modeler application). The authors use 3 different clustering methods and compare the results. This is followed by the use of decision trees in order to learn about the demographic profile of the clusters that have been derived. The entire presentation includes a series of useful illustrations.

Chapter four is a major strength of the book as the contents deal with the task of creating the mining data mart. This is the framework for the various types of data necessary for conducting data mining projects on a recurring basis in a firm. The organization of data is a critical first step in data mining and the process is rarely discussed in an analytical text.

Chapter 5 deals with segmentation and assumes little prior exposure to the topic. The authors discuss the advantages of

segmentation and the major types of segmentation in consumer and business markets. They then present the steps of a segmentation project along with an appropriate set of data mining techniques. The presentation is quite clear and has a useful set of illustrations.

The three remaining chapters are detailed case studies of segmentation in banking, telecommunications and retailing. The book's

website([Insidedatamining.Com](http://Insidedatamining.Com)) offers sample chapters and downloadable Excel data sets. The book uses IBM SPSS Modeler for all the data mining examples. Most of these analyses could be produced by applications such as SAS Enterprise Miner, Statistica Data Miner or Rapidminer.

The text succeeds in offering a good introduction to data mining and market segmentation for almost any reader.