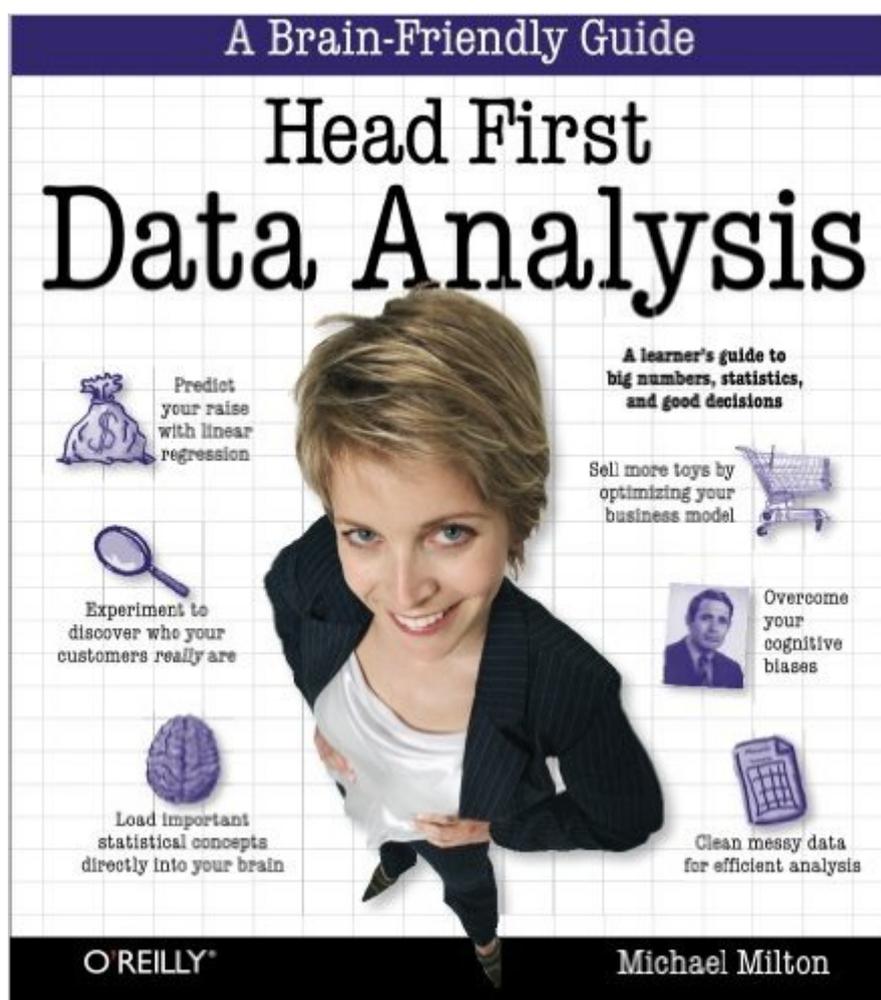# Head First Data Analysis: A Learner's Guide To Big Numbers, Statistics, And Good Decisions

Synopsis

Today, interpreting data is a critical decision-making factor for businesses and organizations. If your job requires you to manage and analyze all kinds of data, turn to Head First Data Analysis, where you'll quickly learn how to collect and organize data, sort the distractions from the truth, find meaningful patterns, draw conclusions, predict the future, and present your findings to others.Whether you're a product developer researching the market viability of a new product or service, a marketing manager gauging or predicting the effectiveness of a campaign, a salesperson who needs data to support product presentations, or a lone entrepreneur responsible for all of these data-intensive functions and more, the unique approach in Head First Data Analysis is by far the most efficient way to learn what you need to know to convert raw data into a vital business tool.You'll learn how to:Determine which data sources to use for collecting informationAssess data quality and distinguish signal from noiseBuild basic data models to illuminate patterns, and assimilate new information into the modelsCope with ambiguous informationDesign experiments to test hypotheses and draw conclusionsUse segmentation to organize your data within discrete market groupsVisualize data distributions to reveal new relationships and persuade othersPredict the future with sampling and probability modelsClean your data to make it usefulCommunicate the results of your analysis to your audienceUsing the latest research in cognitive science and learning theory to craft a multi-sensory learning experience, Head First Data Analysis uses a visually rich format designed for the way your brain works, not a text-heavy approach that puts you to sleep.

Book Information

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Customer Reviews

This book is for professionals that must analyze data in their daily work. First off, if you are unfamiliar with the approach of the "Head First" series of books by O'Reilly, the approach was and is revolutionary in the field of technical writing. The authors of this series know that page after page of terse text will not easily penetrate the brain of the working professional who needs help rather quickly. Traditional textbook models work best on students in a traditional classroom setting who can slowly absorb material over a period of several months with the help of bi-weekly classroom sessions with a professor. The working professional does not have this luxury of time or of personal tutoring.Thus the authors both penetrate your brain and hold your interest by serving information up in unusual ways - odd pictures and illustrations, Q&A sessions, repeating the same material in different ways, and interesting case studies in which you are asked at every step to give your input. They'll even lead you down the the wrong path every now and then so that you remember the right one all the better.As for the subject matter, this is not a book on statistics and how to solve problems in statistics. Instead, it is how you use various statistical models and tools and visualization to analyze often confusing corporate data and come up with recommendations based on that data. Some mathematical methods will be presented as they are necessary to solving the underlying problems - optimization, hypothesis testing, bayesian statistics, subjective probabilities, heuristics, and histograms - these are all mentioned and even have their own chapters. However, this book is also about tools - R and the analysis tools of Excel specifically. In the appendix, this book even shows you how to install R.However, I don't believe that you could get away with knowing nothing of statistics and really get the most out of this book. If you do happen to have the luxury of a little time I suggest the following. Read the excellent Head First Statistics as a tutorial, and then use the problems in Schaum's Outline of Statistics (Schaum's Outline Series) to test your knowledge. Then you should be more than ready for this book.The author has a chapter entitled "leftovers" that tells you what this book does not cover. I include that here so that you don't waste your time if this is what you are looking for:1 Everything else in statistics2 Excel skills - (book assumes previous experience)3 Edward Tufte and his principles of visualization4 PivotTables5 Nonlinear and multiple regression7 Null-alternative hypothesis testing8 Randomness9 Google DocsI highly recommend this book for the right audience with the right experience level.

First, a disclaimer: as one of the technical reviewers for the book, I might be a little biased. Having

said that, I'm willing to bet my copy of Head First Data Analysis that this won't be the last 5-star review you'll find here :-)By my count this is the 20th book in the Head First series, so by now most customers know the story behind the Head First format, style, and pedagogy. These aren't your typical technical books, so if this is the first Head First book you're considering, you owe it to yourself to get a sneak preview first. I think you'll be in for a treat.The Reader does have the first six pages of Chapter 1, which will give you some idea, but I'd recommend going to Head First Labs where you can download and read the entire 2nd chapter. You can also grab the full Table Of Contents in PDF format, which I believe is a little easier on the eyes than the TOC in the Reader.The book is written for folks without hardcore data analysis experience who are looking for an introduction to analyzing data to make better decisions. You won't need a background in statistics, engineering, or computer science. While some data analysis books assume you're a math geek, Michael Milton does not.And while many "Data Analysis" books pretty much revolve around Excel's data analysis functions (Analysis ToolPak, Solver, etc), this book is more about how you work with data, not about how you use a particular software tool. While you do use spreadsheets and a statistical computing software package called "R", the focus is on using the tools between your ears to become a better data analyst.These days almost everyone needs to deal with and interpret data. Those that become successful know how to make sense of it all. This book will help you think about, process, and present your data so you can draw reliable conclusions to real-life questions.

While some of the Head First series have been quite helpful, this one has way too much fluff, making it tedious to find the important content. By way of example, the entire page 97 is devoted to "Profits fell through the floor" with a picture of a sad person, a picture of a pile of rubber ducks, a sample letter expressing a complaint, and the conclusion that "this is pretty bad news." Page 97 lies in the middle of the "optimization" chapter, but you don't get to the punch line on what to do about the "pretty bad news" until page 108. The pace of the book is simply too slow--which I attribute to an overuse of the Head First style, a style supposedly "designed for the way your brain works." My brain would have been happier if the editors had picked up the pace.

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