Business Analytics

Corso di Laurea in Data Analysis
Business Analytics

Corso di Laurea in Data Analysis
Professoressa Emma Zavarrone
Libera Università di Lingue e Comunicazione IULM

James R. Evans
Brief Contents

About the Author VII
Credits IX

Part 1 Foundations of Business Analytics
Chapter 1 Introduction to Business Analytics 27
Chapter 2 Analytics on Spreadsheets 63

Part 2 Descriptive Analytics
Chapter 3 Visualizing and Exploring Data 79
Chapter 4 Descriptive Statistical Measures 121
Chapter 5 Probability Distributions and Data Modeling 157
Chapter 6 Sampling and Estimation 207
Chapter 7 Statistical Inference 231

Part 3 Predictive Analytics
Chapter 8 Trendlines and Regression Analysis 259
Chapter 9 Forecasting Techniques 299
Chapter 10 Introduction to Data Mining 327

Appendix A 611
Glossary 635
About the Author

James R. Evans
Professor, University of Cincinnati College of Business

James R. Evans is professor in the Department of Operations, Business Analytics, and Information Systems in the College of Business at the University of Cincinnati. He holds BSIE and MSIE degrees from Purdue and a PhD in Industrial and Systems Engineering from Georgia Tech.

Dr. Evans has published numerous textbooks in a variety of business disciplines, including statistics, decision models, and analytics, simulation and risk analysis, network optimization, operations management, quality management, and creative thinking. He has published over 90 papers in journals such as Management Science, IIE Transactions, Decision Sciences, Interfaces, the Journal of Operations Management, the Quality Management Journal, and many others, and wrote a series of columns in Interfaces on creativity in management science and operations research during the 1990s. He has also served on numerous journal editorial boards and is a past-president and Fellow of the Decision Sciences Institute. In 1996, he was an INFORMS Edelman Award Finalist as part of a project in supply chain optimization with Procter & Gamble that was credited with helping P&G save over $250,000,000 annually in their North American supply chain, and consulted on risk analysis modeling for Cincinnati 2012’s Olympic Games bid proposal.

A recognized international expert on quality management, he served on the Board of Examiners and the Panel of Judges for the Malcolm Baldrige National Quality Award. Much of his current research focuses on organizational performance excellence and measurement practices.
Text Credits


Chapter 5  Page 177 Excerpt by Chris K. Anderson from Setting Prices on Priceline. Published by Interfaces.

Chapter 7  Page 253 Help Desk Service Improvement Project by Francisco Endara M from Help Desk Improves Service and Saves Money With Six Sigma. Used by permission of The American Society for Quality.

Photo Credits

Chapter 1  Page 27 Analytics Business Analysis: Mindscanner/Fotolia Page 56 Computer, calculator, and spreadsheet: Hans12/Fotolia

Chapter 2  Page 63 Computer with Spreadsheet: Gunnar Pippel/Shutterstock

Chapter 3  Page 79 Spreadsheet with magnifying glass: Poles/Fotolia Page 98 Data Analysis: 2jenn/Shutterstock

Chapter 4  Page 121 Pattern of colorful numbers: JonnyDrake/Shutterstock Page 151 Computer screen with financial data: NAN728/Shutterstock


Chapter 6  Page 207 Series of bar graphs: Kalabukhava Iryna/Shutterstock Page 211 Brewery truck: Stephen Finn/Shutterstock
Credits

Chapter 7  Page 231 Business man solving problems with illustrated graph display: Serg Nvns/Fotolia Page 253 People working at a helpdesk: StockLite/Shutterstock

Chapter 8  Page 259 Trendline 3D graph: Sheelamohanachandran/Fotolia Page 279 Computer and Risk: Gunnar Pippel/Shutterstock Page 280C 4 blank square shape navigation web 2.0 button slider: Claudio Divizia/Shutterstock Page 280L Graph chart illustrations of growth and recession: Vector Illustration/Shutterstock Page 280R Audio gauge: Shutterstock

Chapter 9  Page 299 Past and future road sign: Karen Roach/Fotolia Page 324 NBC Studios: Sean Pavone/Dreamstine

Chapter 10  Page 327 Data Mining Technology Strategy Concept: Kentoh/Shutterstock Page 363 Business man drawing a marketing diagram: Helder Almeida/Shutterstock