

Table of Contents

<i>Introduction</i>	1
<i>Part 1: Getting Started with Data Visualization</i>	5
Chapter 1: Introducing Data Visualization	7
Understanding Data Visualization	7
Understanding the importance of data viz	8
Discovering who uses data viz	8
Recognizing the Traits of Good Data Viz	9
Embracing the Design Process	9
Ensuring Excellence in Your Data Visualization	10
Chapter 2: Exploring Common Types of Data Visualizations	13
Understanding the Difference between Data Visualization and Infographics	13
Picking the Right Content Type	16
Appreciating Interactive Data Visualizations	18
Observing Visualizations in Different Fields	19
Using Dashboards	22
Discovering Infographics	22
Examining different types of infographics	23
Taking advantage of online infographic tools	26
Chapter 3: Knowing What You Must about Big Data	29
Defining Big Data	29
Seeing How Big Data Changes Business	30
Getting to know your customers	31
Discovering the Four V's	32
Collecting structured and unstructured data	33
Ensuring the use of quality data	34
Avoiding Dying by Tool Choice	35
Tableau	36

Part II: Mastering Basic Data Visualization Concepts.... 39**Chapter 4: Using Charts Effectively..... 41**

Deciding Which Charts to Use and When to Use Them	41
Understanding where newbies should start	42
Choosing simple and effective charts	43
Using gauges and scorecards to monitor	47
Finding online tools for chart making	49
Dipping Into Less-Common Charts.....	49

Chapter 5: Adding a Little Context. 53

Making Text Useful	55
Adding text labeling.....	56
Considering text positioning.....	57
Choosing text fonts.....	58
Choosing text color	60
Exploring Text Analysis	61
Determining what makes text analysis so important.....	63
Building a text analysis statement.....	63

Chapter 6: Paying Attention to Detail 67

Uncovering How People Digest Data.....	67
Presenting Common Visual Patterns	71
Z and F patterns	72
Pattern design	73
Deciding to Use a Template	74
Achieving Consistency across Devices.....	75
Embracing responsive design	76
Following app design standards	77

Part III: Building Your First Data Visualization..... 79**Chapter 7: Defining an Easy-to-Follow Storyboard 81**

Business Intelligence Overview	82
Delving Into Your Story	83
Uncovering storyboard content.....	84
Identifying your audience	85
Documenting Goals.....	87
Documenting KPIs.....	89
Building Your First Storyboard.....	91
Section 1: Current State	91
Section 2: Trends	92
Section 3: Forecast.....	94
Section 4: What-if	95

Chapter 8: Developing a Clear Mock-Up	99
Getting Started with Your Mock-Up	100
Sticking to black and white	100
Using good ol' pencil and paper	101
Using web-based or desktop tools	103
Building Template Layouts	105
Chapter 9: Adding Effective Visuals to Your Mock-Up	109
Recognize the Three Traits of an Effective Visual	110
Data is clear	110
Visual fits the data	112
Exceptions are easy to spot	112
Focus on Insight, Not Hindsight	113
Add Visuals to Your Mock-Up	114
Section 1: Current State	115
Section 2: Trends	118
Section 3: Forecast	125
Section 4: What-If	127
Chapter 10: Adding Functionality and Applying Color	131
Recognizing the Human Components	131
Humanizing your visualizations	132
Thinking mobile first	132
Adding functionality	133
Choosing navigation by using rules	134
Identifying the most popular menu types	136
Dipping Into Color	139
Taking advantage of company branding guidelines	139
Choosing colors without guidelines	142
Using RAG colors	144
Chapter 11: Adding Some Finishing Touches	147
Choosing Useful Links	147
Introducing six mandatory links	149
Including a last updated timestamp	154
Adding Legal Stuff	155
Embracing the copyright	155
Delving into terms and conditions	156
Discovering Visual Cues	156
Adding Location Intelligence	158



Chapter 12: Exploring User Adoption161

- Understanding User Adoption 162
- Considering Five UA Measurements 162
- Marketing to Data Viz Users 163
 - Ensure data availability and accuracy 164
 - Use buy-in and ownership to engage users 164
 - Give each data viz the right name 164
 - Use internal social media platforms and intranets 165
 - Go live on internal platforms 166
 - Do away with training 166
 - Make sure that the data viz looks great 166
 - Provide 24/7 accessibility 166
 - Provide speed and reliability 166
 - Speed the delivery of your data viz 167

Part IV: Putting Data Viz Techniques into Practice..... 169

Chapter 13: Evaluating Real Data Visualizations171

- Analyzing Data Visualizations by Category 171
 - Big-picture considerations 172
 - Color 173
 - Design issues 173
 - Text formatting 174
 - Menus 175
 - Interactivity 175
 - Design for mobile 175
- Evaluating Data Visualizations 176
 - Data visualization 1 176
 - Data visualization 2 177
 - Data visualization 3 178
 - Data visualization 4 180
 - Data visualization 5 181
 - Data visualization 6 182
 - Data visualization 7 183
 - Data visualization 8 185
 - Data visualization 9 186
 - Data visualization 10 187
 - Data visualization 11 188
 - Data visualization 12 189

Chapter 14: Recognizing Newbie Pitfalls	191
Going Overboard with Data.....	192
Falling into the One-Shoe-Fits-All Trap	193
Focusing on the Tool Instead of the Story	194
Building Mobile Last.....	195
Abusing Pie Charts	197
Using Green for Alerts.....	197
Ignoring Basic Statistics.....	200
Knowing the probability that an event will occur	200
Applying variance to show the magnitude of change.....	201
Forecasting the future	202
Not Mastering User Engagement	204
 Part V: The Part of Tens	 207
 Chapter 15: Top Ten Data Visualization Resources	 209
Edward Tufte.....	209
Visual.ly	210
The Functional Art.....	210
Visualizing Data	210
Chart Porn	210
The Excel Charts Blog.....	211
FlowingData.....	211
Datavisualization.ch.....	211
GE Data Visualization.....	211
#dataviz and #bigdata.....	212
 Chapter 16: Top Ten Fears of New Data-Viz Creators	 213
Telling the Wrong Story.....	213
Creating an Ugly Data Viz	214
Picking the Wrong Things to Measure.....	214
Alienating Other Stakeholders.....	215
Misunderstanding the Audience for Your Data Viz.....	215
Forgetting about Copyrights and Legal Matters.....	216
Selecting the Wrong Tool	216
Making the Wrong Chart Choices.....	217
Picking Bad/Noncomplementary Colors	217
Using Too Much Data.....	218
 Index.....	 219