

Data-Driven Decision Making

Unit 6: Creating Effective Visualizations



Course Overview

- ▶ Unit 1: Introduction to Data-Driven Decision-Making
- ▶ Unit 2: Transforming to a Data-Driven Decision-Making Enterprise
- ▶ Unit 3: The Role of Leadership
- ▶ Unit 4: Types of Data
- ▶ Unit 5: Deriving Data Insights
- ▶ **Unit 6: Creating Effective Visualizations**
- ▶ Unit 7: Database Marketing and Customer Relationship Management
- ▶ Unit 8: Data-Driven Uses and Misuses



Unit 6 Learning Outcomes

- ▶ examine visualization best practices for different audiences
- ▶ identify why creating effective visualizations is an iterative process
- ▶ explain how data visualizations can be used to tell stories



Why are Learning Outcomes Important?

- ▶ Every learning outcome ties back to course materials and content.
- ▶ Assessments are tied to each learning outcome.
- ▶ Test preparation



Unit 6 Topics

- ▶ Data Visualization
- ▶ Telling Stories with Data



Unit 6 Vocabulary

- ▶ clarity
- ▶ efficiency
- ▶ exploratory graphics
- ▶ linear storytelling
- ▶ parallel storytelling
- ▶ precision
- ▶ presentation graphics
- ▶ random access storytelling
- ▶ sequence
- ▶ storytelling
- ▶ user-directed path storytelling
- ▶ visualization



Data Visualization

▶ Data Visualization Design Principles

- ▶ Show the data
- ▶ Focus the viewer's attention on the substance instead of the methodology
- ▶ Avoid distorting the data
- ▶ Present many numbers in a small space
- ▶ Make large data sets easier to understand
- ▶ Present the data at several levels of detail -- from a high-level overview to a deep data dive



Data Visualization Process

▶ Presentation Graphics and Exploratory Graphics



Student	Score
1	95
2	93
3	93
4	92
5	90
6	87
7	86
8	75
9	70
10	70
11	33

Grades	Number of Students
A	5
B	2
C	3
D	0
F	1



Storytelling with Data

- ▶ Linear storytelling
- ▶ User-directed storytelling
- ▶ Parallel storytelling
- ▶ Random-access storytelling



Conclusion

Unit 6 Learning Outcomes:

- ▶ examine visualization best practices for different audiences
- ▶ identify why creating effective visualizations is an iterative process
- ▶ explain how data visualizations can be used to tell stories



What's next?

Unit 7: Database Marketing and Customer Relationship Management

