



BrightWorld Labs



**DATA
ANALYTICS**

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DATA MANAGEMENT FOR BUSINESS INTELLIGENCE **Workshop**



Day 1—Data, Analysis, & Acquisition

1. Data & Information

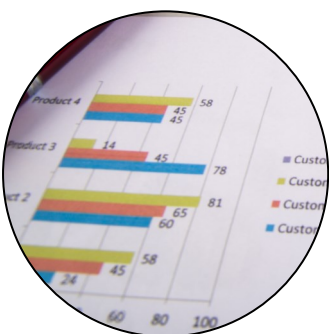
- Data, Information, & Knowledge
- Data Vs. Big Data
- The “Vs” of Big Data
- Structured Data and Unstructured Data
- Reliability and Validity

2. Data & Statistics

- Why analyze data?
- Data Analysis Workflow
- Reproducibility and Replicability
- Descriptive Statistics & Inferential Statistics

3. Organizing Data

- Types of Data Variables
- Discrete and Continuous Distributions
- Sources of Data
- Sampling Techniques



Day 2—Data, Analysis, & Acquisition

4. Practice Example

- Practice Example Using Excel
- Organizing Data for Better Analysis
- Getting Data into Tabular Form
- Sorting, Filtering, & Cross-Tabulation

5. Descriptive Statistics

- The Central Tendency of Data
- Mean, Median, Mode
- Range
- Quartiles
- Variance
- Standard Deviation

6. Basic Probability

- What is Probability?
- Four Basic Rules
- Calculating Probability
- Conditional Probability
- Bayesian Analysis



Day 3—Fitting Models, Hypothesis Testing, Simulation

7. Fitting Models

- Bivariate Data
- Covariance & Correlation
- Regression
- Multivariate Data
- Clustering

8. Hypothesis Testing

- Test of Significance
- Setting up a Test Statistic
- T-Test & Z-Test

9. Simulation

- Monte Carlo Simulation
- Using Monte Carlo Simulation
- Modern Predictive Analytics