



Business Analytics Practices and Applications

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Module 0. About the Course (4 min)

- *About the Author*
- *Course Objectives*
- *Audience and Pre-requisites*
- *Course Structure*

Module 1. Introduction (14 min)

- *What, How, & Why*
- *What Happened?*
- *How Did it Happen?*
- *Why Did it Happen?*
- *Cheat Sheet*
- *Tools*
- *Major Components of Analytics*

Module 2. Advanced Visualization (39 min)

- *Overview*
- *Definitions of Advanced Visualization*
- *Advanced Visualization Components*
- *Heat Maps*
 - *Introduction*
 - *Examples*
 - *Use Cases*
 - *When to Use*
 - *When Not to Use*
- *Tree Maps*
 - *Introduction*
 - *Examples*
 - *Use Cases*
 - *When to Use*
 - *When Not to Use*
- *Spark Lines*
 - *Introduction*
 - *Examples*
 - *Use Cases*
 - *When to Use*
 - *When Not to Use*
- *Time Series*
 - *Introduction*
 - *Examples*
 - *Use Cases*
 - *When to Use*
 - *When Not to Use*
- *Dials and Gauges*
 - *Introduction*
 - *Examples*
 - *Use Cases*
 - *When to Use*



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- When Not to Use
- *Geographic Analysis*
- *Review*

Module 3. Statistical Analysis, Data Mining, Unstructured Data Analytics (36 min)

- *Statistical Analysis*
 - Introduction
 - Use Cases
 - When to Use
 - When Not to Use
- *Data Mining*
 - Definition of Data Mining
 - Data Mining Relationship Types
 - Classification
 - Clustering
 - Association
 - Sequential
 - Major Components of Data Mining
 - Decision Tree
 - Introduction
 - Use Cases
 - Example of Decision Tree Methods
 - When to Use
 - When Not to Use
 - Decision Tree Iteration
 - Rule Induction
 - Introduction
 - Use Cases
 - Example of Decision Tree Methods
 - When to Use
 - When Not to Use
 - Rule Induction Iteration
 - Nearest Neighbor
 - Introduction
 - Use Cases
 - Example of Decision Tree Methods
 - When to Use
 - When Not to Use
 - Nearest Neighbor Iteration
 - Other Types of Data Mining
 - Review
- *Unstructured Data Analytics*
 - Major Components of Unstructured Analytics
 - Learning from the Multidimensional Wars
 - Text Analytics
 - Introduction
 - Use Cases
 - When to Use



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- When Not to Use
- Text Analytics as a Funnel
- Big Data Analytics
 - Introduction
 - Use Cases
 - When to Use
 - When Not to Use
 - Structure Example

Module 4. Applying Analytics (78 min)

- *Getting Your Business Hat On*
- *Leading Vs. Lagging Indicators*
- *When Leading and Lagging is Not Enough*
- *New Paradigm*
- *Analysis Chains – Parts 1 & 2*
- *Analysis Chains Review*
- *Use Case 1: Online Video Gaming*
 - Overview
 - Classifying the Metrics
 - Applying Analytics to Analysis Chains
 - Where to Source the Data
 - Picking the Best Tool
 - Tools
 - Highly Understood Structured Data
 - Less Understood Structured Data
 - Highly Understood Unstructured Data
 - Less Understood Unstructured Data
 - Established Relationships
 - Suspected Relationships
- *Use Case 2: Engineering Example*
 - Overview
 - Classifying the Metrics
 - Mapping Relationships
 - Tools and Technologies
- *Use Case 3: Prison Systems*
 - Overview
 - Classifying the Metrics
 - Tools
- *Use Case 4: Hospitality*
 - Overview
 - Classifying the Metrics
 - Mapping the Relationships
 - Tools – Parts 1, 2 & 3
- *Use Case Summary*
- *Best Practices in Practice*
 - Overview
 - Phase vs. Fusion
 - What Life Stage are Initiatives at Currently?
 - Fusing Initiatives
 - Logical Progression



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- Cultural Impact
- Philosophical Wars
- Vendor Relationships
- Review