

SCM 651: Business Analytics

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Week 6

Agenda

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- Homework #2: discussion
- Homework #3: overview
- Review of concepts
- Group discussion of articles
 - Modern Analytics and the Future of Quality Performance Excellence
 - A Process of Continuous Innovation: Centralizing Analytics at Caesars

Homework #2

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- Campaign time frames, costs, effectiveness
- Future campaign: geographic regions, key words, day of week and time of day
- Allocation of costs by program and region
- Performance measures
- Other data that would be helpful

Homework #3

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1. Graph, regression, calculated sales, revenue, profit
2. Constrained optimization
3. Discussion of risks, other data which would be valuable

Week 6 - Review

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- Goal Seek
 - Searches for one goal such as break even point (profit = 0)
 - Allows one variable to be changed in search of the goal
 - Does not allow constraints on the search
- Unconstrained optimization
 - Does not constrain any variables in the search
 - Can search for maximum, minimum, or specific values
 - Can use linear programming (straight line functions) or non-linear programming (curved functions)

Week 6 - Review

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- Valuable functions: Sumproduct
 - Multiplies rows or columns together, then adds result
- Constrained optimization
 - Can set variables to less than or greater than some constraint
 - Can set variables to be integer or binary

Article #1: Modern Analytics and the Future of Quality Performance Excellence

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- Modern Analytics and the Future of Quality Performance Excellence
 - Define analytics (page 6)
 - How are companies using analytics in (page 7):
 - Banks
 - Manufacturing
 - Retail
 - Pharmaceuticals
 - Sports
 - Modern analytics integrates which three fields (page 8)?
 - What are some examples of data sources (page 9)?
 - What are examples of data visualization (page 11)?

Article #1: Modern Analytics and the Future of Quality Performance Excellence

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- Modern Analytics and the Future of Quality Performance Excellence
 - Define analytics (page 6)
 - “a process of transforming data into actions through analysis and insights in the context of organizational decision making and problem solving”
 - “the use of data, information technology, statistical analysis, quantitative methods, and mathematical or computer-based models to help managers gain improved insight about their business operations and make better, fact-based decisions”

Article #1: Modern Analytics and the Future of Quality Performance Excellence

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- Modern Analytics and the Future of Quality Performance Excellence
 - How are companies using analytics in (page 7):
 - Banks: prevent fraud
 - Manufacturing: production planning, purchasing, inventory mgt
 - Retail: recommend products and optimize marketing promotions
 - Pharmaceuticals: get drugs to market more quickly
 - Sports: determine game strategy and optimal ticket prices

Article #1: Modern Analytics and the Future of Quality Performance Excellence

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- Modern Analytics and the Future of Quality Performance Excellence
 - Modern analytics integrates which three fields (page 8)?
 - Business intelligence/information systems
 - Statistics
 - Quantitative methods/operations research
 - What are some examples of data sources (page 9)?
 - Supermarket scanners
 - Click streams from the web
 - Customer transactions
 - Email, tweets, social media
 - What are examples of data visualization (page 11)?
 - Dashboards and scorecards

Article #2: A Process of Continuous Innovation: Centralizing Analytics at Caesars

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- A Process of Continuous Innovation: Centralizing Analytics at Caesars
 - Why does Caesars use analytics (pages 1 & 2)?
 - What are four lessons learned from their experience (page 3)?

Article #2: A Process of Continuous Innovation: Centralizing Analytics at Caesars

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- A Process of Continuous Innovation: Centralizing Analytics at Caesars
 - Why does Caesars use analytics (pages 1 & 2)?
 - Create a rich customer experience
 - Marketing based not only on their preferences but on their actions
 - Gaming analytics, revenue management, finance, marketing analytics, hotel operations and labor
 - What are four lessons learned from their experience (page 3)?
 - Sense of scale
 - Adequate infrastructure
 - Communications with stakeholders
 - Visible and meaningful wins