OVERVIEW AND LEARNING OUTCOMES

Data visualization tools have flooded the market since mid-2010s. The market is in an early consolidation stage right now, with several key products merging as market leaders. In this module, we will:

1. Explore data visualization tools and market.
2. Describe major tools including Tableau, Power BI, Google Charts, D3.
3. Categorize data visualization systems and tools.
4. Discuss major desired features of a data visualization tool.
5. Get started on Tableau.

This module is related to course level learning outcomes 2.

TASK LIST

1. Complete the required readings and the lecture notes listed in learning materials. Use the questions in “Research and Discuss” section to guide your readings.
2. Use the lecture notes as a reading and learning guide; follow the resources presented in the notes for further information and additional learning.
3. Research and discuss: Use these questions to guide your readings and conduct your own research if necessary. There is no submission on these questions, but you are welcome to discuss them and report your findings in the discussion board if you feel the need.
   a. Find and review some popular tools in the following categories
      i. Desktop visualization tools that focus on users (self-service)
      ii. Desktop visualization tools that focus on developers/designers or power analytical users
      iii. JavaScript libraries for web application developers
      iv. Dashboard development tools
   b. Why do you think Tableau achieves the leader position in the market?
4. Complete lab 1 on Tableau.

LEARNING MATERIALS

1. Core readings:
   a. Magic Quadrant for Business Intelligence and Analytics Platforms 2017 (reprint) - check how Gartner evaluated Tableau in this report: https://www.gartner.com/doc/reprints?id=1-3TYE0CD&ct=170221
   b. Interpreting Magic Quadrant results: http://www.jenunderwood.com/2017/02/22/2017-gartner-bi-magic-quadrant-results/
   c. Tableau's summary of innovations: https://www.tableau.com/about/blog/2017/2/tableau-five-years-leader-gartners-magic-quadrant-analytics-66133
   d. Understand the industry; compare tools
      i. http://www.pcmag.com/roundup/346417/the-best-data-visualization-tools read the article and follow the links to learn about key tools
iii. [https://www.g2crowd.com/categories/data-visualization](https://www.g2crowd.com/categories/data-visualization) - use this tool to see some positioning of the tools by G2 Crowd Grid; interestingly they left out self-service BI tools like Tableau – check here [https://www.g2crowd.com/categories/self-service-business-intelligence](https://www.g2crowd.com/categories/self-service-business-intelligence)
iv. [http://selection.datavisualization.ch](http://selection.datavisualization.ch) - use this interactive tool to see more tools.

2. Tableau lab 1 getting started
3. Additional resources and readings: some more good readings. More can be found in the lecture notes. Find your own resources and conduct your own research if necessary.
   b. [https://www.betterbuys.com/bi/tableau-vs-power-bi/](https://www.betterbuys.com/bi/tableau-vs-power-bi/)
   d. Tableau tutorial from tutorialspoint: [https://www.tutorialspoint.com/tableau/tableau_overview.htm](https://www.tutorialspoint.com/tableau/tableau_overview.htm)