

Introduction

Data Management and Visualization



SoftEng
<http://softeng.polito.it>

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Main topics

- Purpose and history of data visualization
- Visualization literacy
 - ◆ Visual perception
 - ◆ Graph design (and redesign)
- Data quality in graphs

Visualization skill

- Tool:  + a b | e a u
- Practice with different visualization problems and graph types
 - ◆ Visualization analysis
 - ◆ Redesign with Tableau
 - ◆ Visualization of a (complex) dataset
 - ◆ Geographic roles and maps
 - ◆ Dataviz exam simulation

Tableau

1. You'll receive a license via email
2. Install Tableau Desktop from:
<https://www.tableau.com/tft/activation>
3. Sign up with Polito email.
4. Academic license link (not needed as you'll get a course license):
<https://www.tableau.com/academic/students>
5. Tableau Cloud (limited seats available, instructions via email)

Additional tools

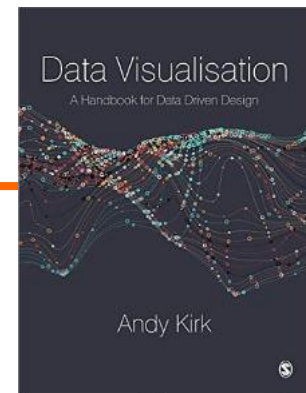
- Salesforce Trailhead (MOOC):
<https://trailhead.salesforce.com/content/learn/trails/become-a-data-driven-team-using-tableau>
- Digistorm (during lectures)
- Piazza (asynchronous Q&A)

Dataviz exam [6 points]

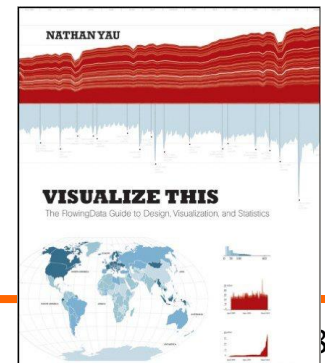
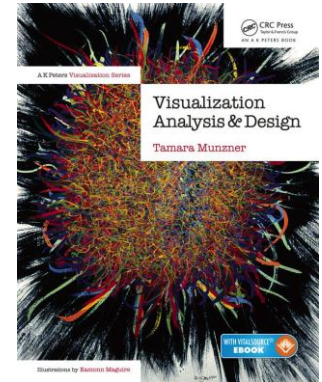
- Theory [1*]
- Assessment
 - ◆ Question [0.25*]
 - ◆ Data [1.25*]
 - ◆ Visual
 - Proportionality [0.75]
 - Utility [0.75]
 - Clarity [0.5]
- Redesign [0.25* + 1.25]

* Multiple choice questions

Suggested books

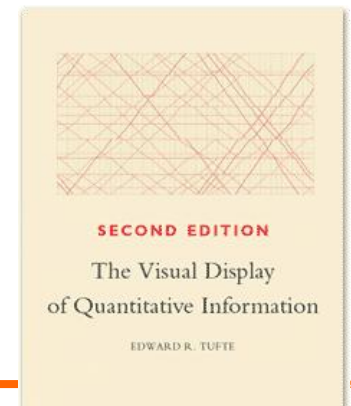
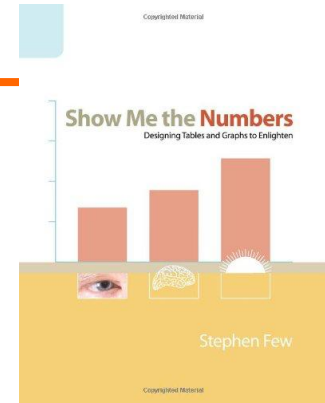


- Andy Kirk, 2016
Data Visualization – A Handbook for Data Driven Design
Sage
- Tamara Munzner, 2014
Visualization Analysis and Design
CRC Press
- Nathan Yau, 2011
Visualize This: The FlowingData Guide to Design, Visualization, and Statistics
Wiley



Suggested books

- Stephen Few, 2004.
Show me the numbers.
Analytics Press.
 - ◆ <http://www.perceptualedge.com/blog/>
- Edward R. Tufte, 1983.
The Visual Display of Quantitative Information.
Graphics Press.



Suggested books

- Stephanie Evergreen, 2013. Presenting Data Effectively: Communicating Your Findings for Maximum Impact, SAGE Publications.
- Alberto Cairo, 2012. The Functional Art: An introduction to information graphics and visualization, New Riders.
- William S. Cleveland, 1994, The Elements of Graphing Data, Hobart Press

