Business Research and Data Analytics

Lecture 5: Data analysis in MS Excel: data dashboards

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April 3, 2024

Agenda

1. Basic Data Dashboards in MS Excel
    1. Some examples
    2. Data Dashboards: Key things
2. Practicum: Creating Data Dashboards
3. In-class Assignment

1. Basic Data Dashboards in MS Excel

Excel dashboards make it easy to perform quick overviews of data reports rather than going through large volumes of data.

You just need to have ***clean*** data!

Source: https://corporatefinanceinstitute.com/resources/excel/excel-dashboards/

Examples

1. File: *Dashboard_example_from_TrumpExcel.xlsx*

2. Link: *https://bank.gov.ua/en/news/all/zvit-schodo-stres-testuvannya-bankiv-u-2021-rotsi* -> Download *Stress Test Results in 2021*

Data Dashboards: Key things

Creating a basic data dashboard in MS Excel involves presenting data in a visual and interactive way to provide insights and trends.

Path to the dashboard

Prepare Your Data

- Organize your data in a structured manner. Ensure it's clean, organized, and ready for analysis.

Select Data Visualization Types

- Decide on the types of visualizations (charts, graphs, tables) that best represent your data and insights.

Create Charts and Graphs

- Select the data you want to visualize.
- Go to the "Insert" tab in Excel.
- Choose a chart type (e.g., bar chart, line chart, pie chart) that suits your data.
- Customize the chart by right-clicking on elements to change colors, labels, and titles.

Data Dashboards: Key things

Path to the dashboard (2)

Build Pivot Tables

- Select your data.
- Go to the "Insert" tab and choose "PivotTable."
- Choose the fields for rows, columns, and values to analyze your data in a structured table.

Create Slicers (optional)

- For interactivity, insert slicers* (i.e., graphical filters) linked to your PivotTables.
- Click on the PivotTable, go to the "Analyze" tab, and select "Insert Slicer."

Link Elements for Interactivity

- If you have multiple charts and tables, ensure they are linked. Or just link a specific cell for dynamics.
- Use PivotTables and slicers to update all connected elements when a selection is made.

Format and Design

- Enhance the aesthetics by formatting charts, slicers, and tables.
- Use consistent colors, fonts, and styles to maintain a cohesive look.

** Slicers in Excel are specifically designed to provide an interactive way to filter data.*

Data Dashboards: Key things

Path to the dashboard (3)

Arrange Elements

- Arrange and position charts, tables, and slicers on the Excel worksheet to create a cohesive dashboard layout.

Add Titles and Labels

- Include titles, subtitles, and labels to guide the viewer and provide context.

Test Interactivity

- Test the dashboard's interactivity to ensure charts and tables update dynamically based on slicer selections.

Save and Share

- Save your Excel file.
- If needed, share the file or create a PDF for easy distribution.

Data Dashboards: Key things

Tips for creating effective data dashboards

- ✓Use clear and concise titles and labels for all charts and tables.
- ✓Use consistent formatting throughout the dashboard.
- ✓Use a limited color palette.
- ✓Use white space to avoid overcrowding your dashboard.
- ✓Make sure your dashboard is mobile-friendly.
- ✓Regularly update your dashboard with new data and insights.

2. Practicum: Creating Data Dashboards

What we do

Provided that you are already familiar with data visualization and PivotTables in MS Excel:

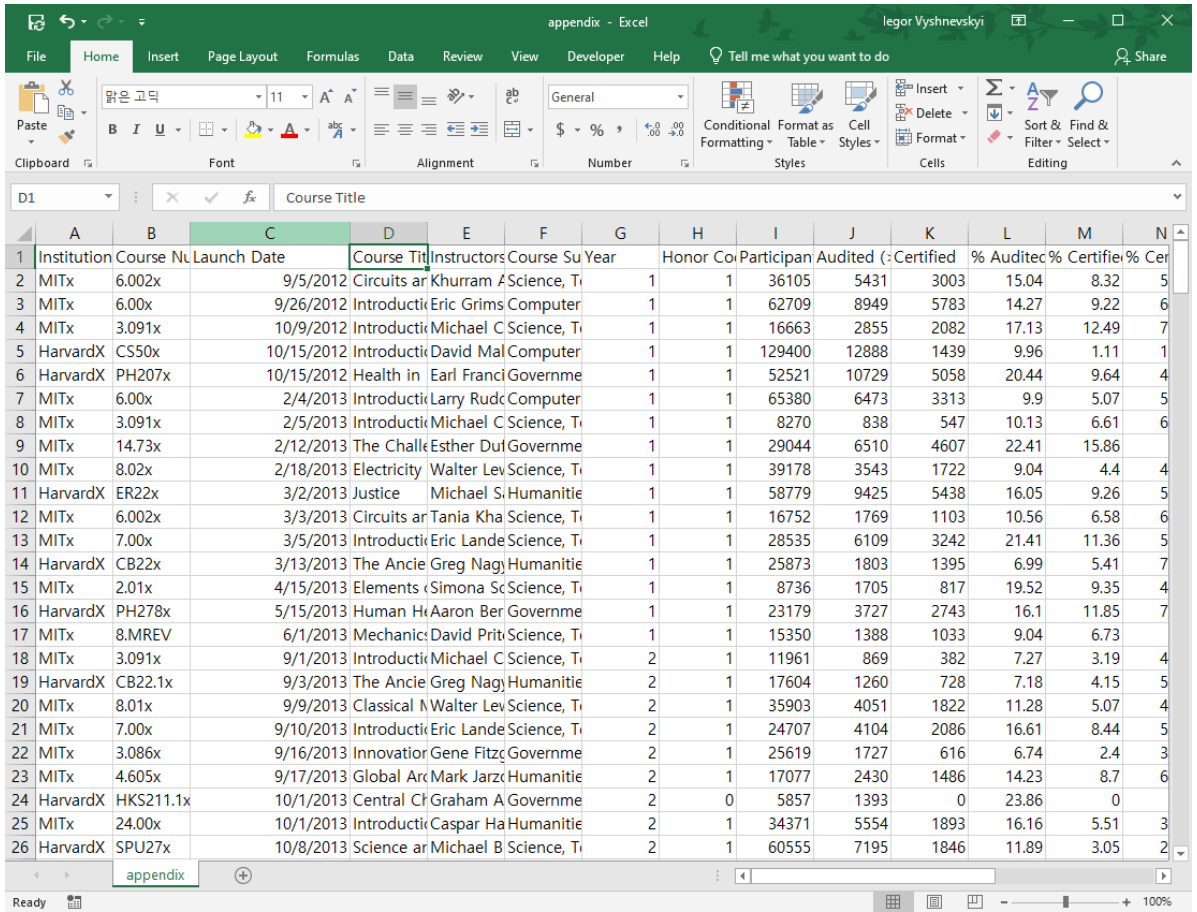
- Use a appendix file
- Build a dashboard (bunch of graphs and tables)
- Data Communication (i.e., *presentation*)
- Conclusions

File to be used: *appendix.xlsx*

Our Data

Let's:

1. Observe our data. Is your data clean?;
2. Think on what to show/want to show.



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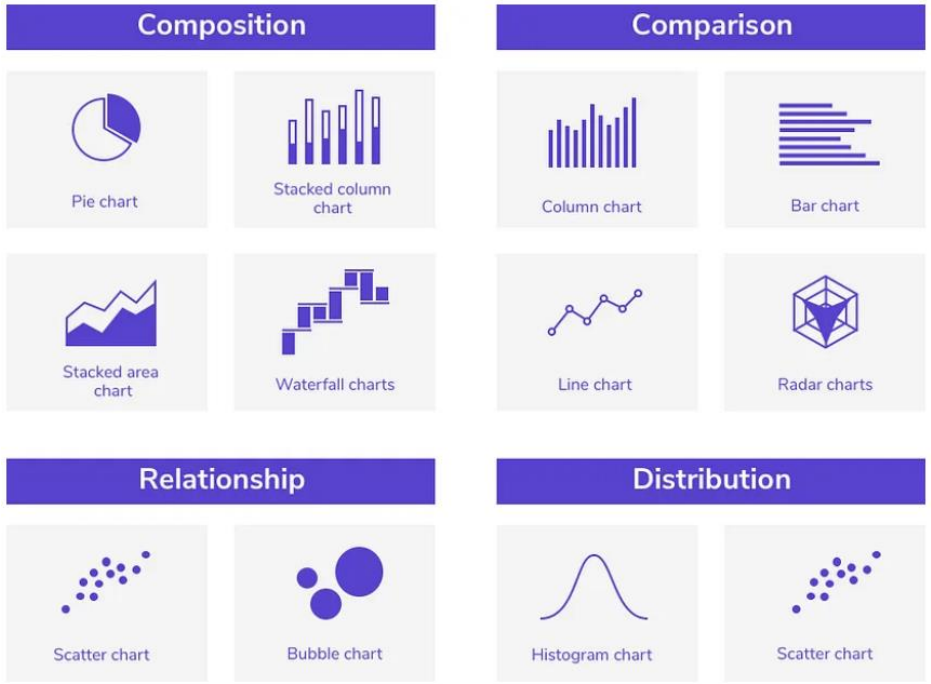
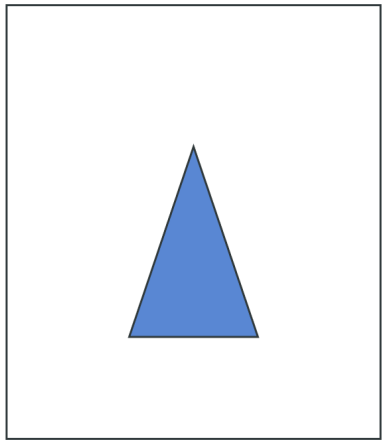
26	HarvardX	SPU27x	10/8/2013	Science ar	Michael B	Science, T	2	1	60555	7195	1846	11.89	3.05	2

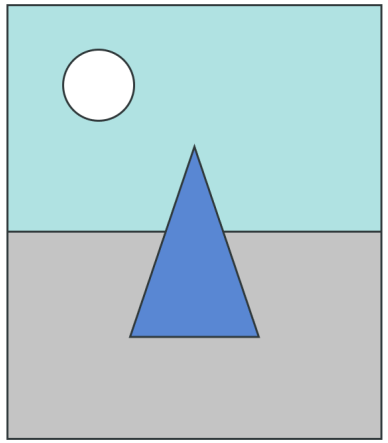
Story

- What can you tell from this data?
- What elements (tables / graphs) do you want to use?





Data



+ Storytelling

Your Story time

Finally, you can move to create your story.

Be ready to show / present your work by 2:45 pm.

3. In-class Assignment

Instructions

Please open the DataCamp Group and do the following:

- Complete at least Chapters 3 & 4 of the Data Visualization in Excel course.
- Please don’t use the DataCamp in-build AI helper.
- Submit the screenshot showing the completion of these chapters.

It's an individual assignment.

Max score: 10 points