Introduction to Data Visualization Part 2: Tools

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Overview

- 7 different tools
- Explain criteria used for testing
- Pros and Cons
- Discussion of best application of each tool
- Questions

Criteria for selection

- I picked a few options that best fit my criteria for successful usage.
- My criteria for testing tools:
  - Create a simple analysis comparing employee and avg cost per completion of digitizing an object
  - Filter the results based on various dimensions
  - Split the analysis into different pages
  - Share the results easily

Excel

- Excel and Data go hand in hand
- Spreadsheets and so much more

Why you should use it

- Integrates with data from almost anywhere
- Familiar setting for most users
- Calculations in excel are powerful
- Huge community to help you when you are stuck

Possible downsides

- Difficult to master
- Not easy to publish dynamic charts online

Did it pass my test

- Yes

Tableau

- This is what the software was built to do.
- Clever touches help you at every step.

Why you should use it

- Easier to learn
- Tons of support resources
- Constant updates continue to increase functionality
- Easy to publish results online
- Blend data from multiple sources

Possible downsides

- Cost prohibitive ($70 per user per month)
- Tradeoff: functionality vs. ease of use
  - Sometimes its easier to go back to the data and manipulate it before bringing to tableau

Did it pass my test

- Yes
- What it beat to make the list: Microsoft Power BI

Google Sheets / Google Data Studio

- Google seems to have a solution to everything
- Surprisingly useful for a free tool

Why you should use it

- Logical design layout and familiar
- No cost for you to try it
- Easy to get visuals working
- Can create most visuals you will need

Possible downsides

- Beta
- Could go away (Google has a history)
- Does not [connect](#) to most data sources directly

Did it pass my test

- Yes,……….. but it was weird

Datawrapper

- The quick solution to your data visualization problems
- A tool built by journalists to meet deadlines
- The copy and paste master
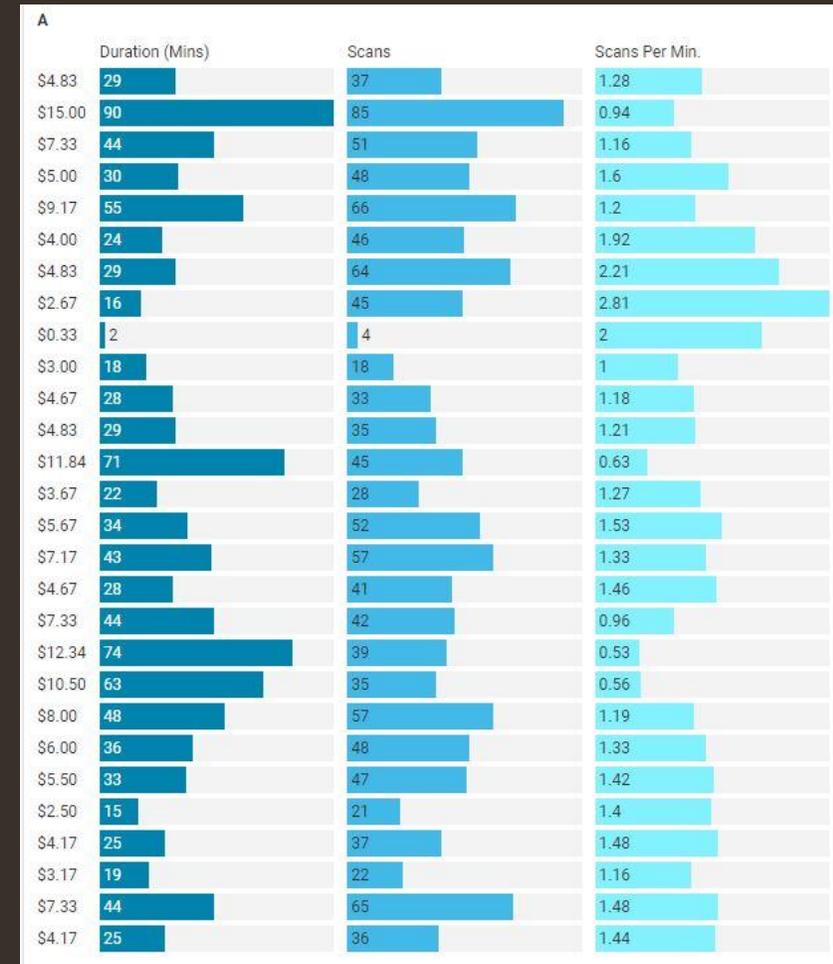
Why you should use it

- Quickest option to create simple visualizations
- No cost to try (though free access is limited to 10,000 chart views per month)

Possible downsides

- Does not scale
- Limited functionality
- Not a dynamic solution (but still interactive)

Did it pass my test

○ No... but it has some nice options that make it worth trying.

○ What it beat to make the list: Raw

Highcharts

- Something a little different from the rest
- Data plus JavaScript equals dynamic web visuals

Why you should use it

- Free to use for individuals, schools, and non-profits
- Highcharts cloud makes creating charts simple and quick
- No view limit
- Live data update functionality

Possible downsides

- Highcharts cloud is very limited
- Need to know JavaScript to get the most out of the product
  - But available documentation is good

Did it pass my test

- No,…. but it offers a free solution for most simple visualizations (highcharts cloud)
- Can be a workaround for publishing excel visuals
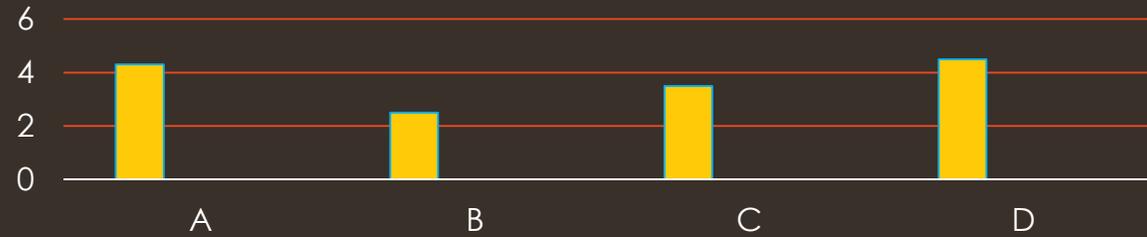
- What it beat to make the list: D3js

Honorable Mention: Alma Analytics

○ If you have it why not use it?

○ A nice compliment for generated reports

○ Allows for user interaction

○ Can be exported to PDF, Excel, or Powerpoint (limitations apply)

What it looks like

Bonus: [OpenRefine](#)

- Great free tool for cleaning up data

Conclusion

- Best all around: Tableau and Excel
- Best free option: Highcharts or Google Data Studio
- Best for use in a pinch: Datawrapper

Questions