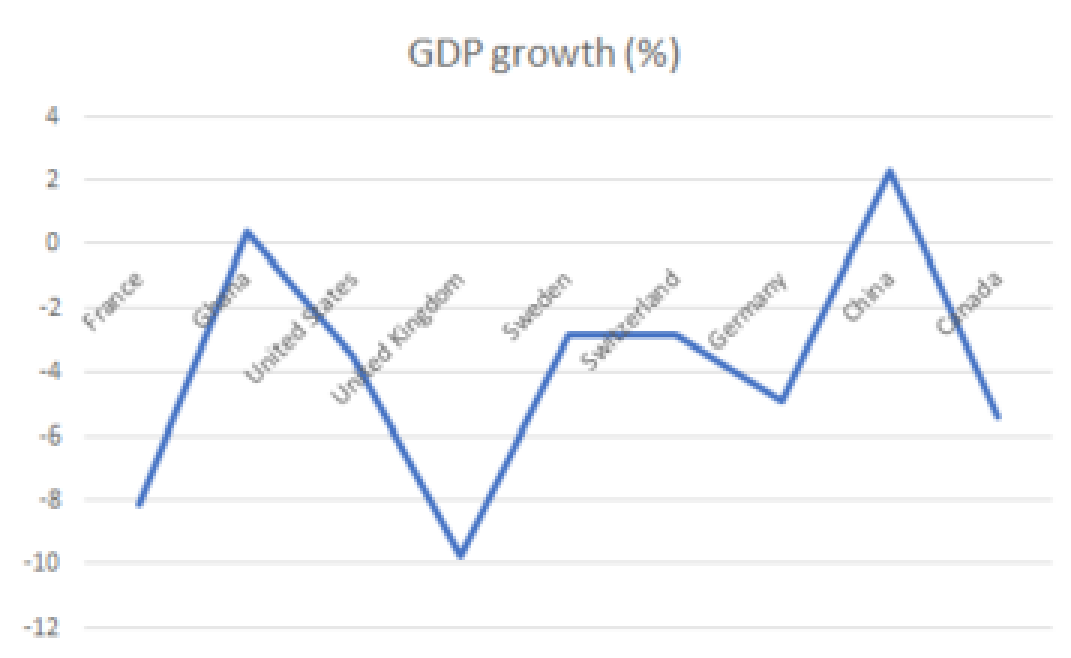


# Some “bad” visualization examples

CT II – Visualização de Dados

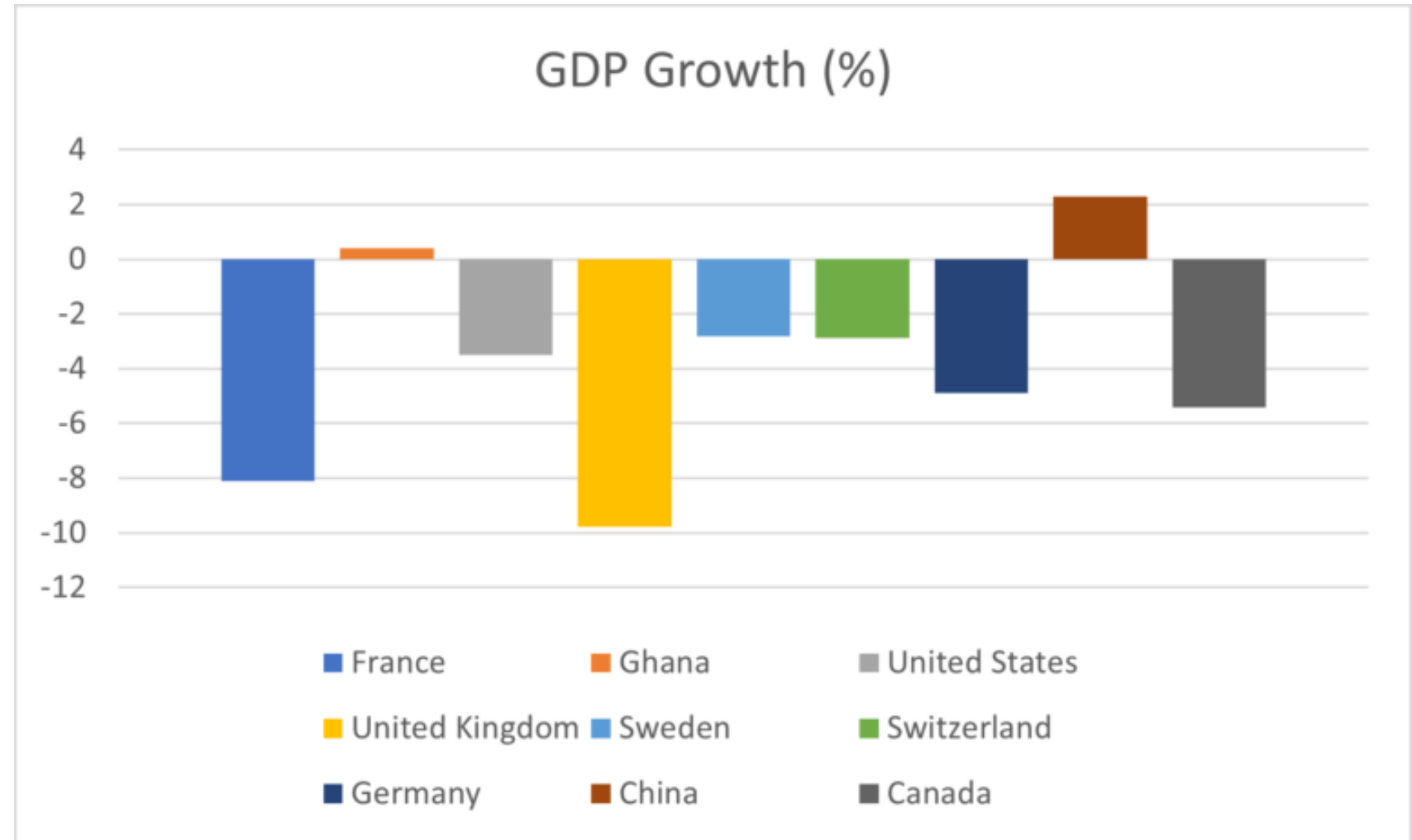
Joaquim Madeira

# Good Chart Choice ?



# Better Alternative

- What can still be improved ?



# Wrong Chart Type

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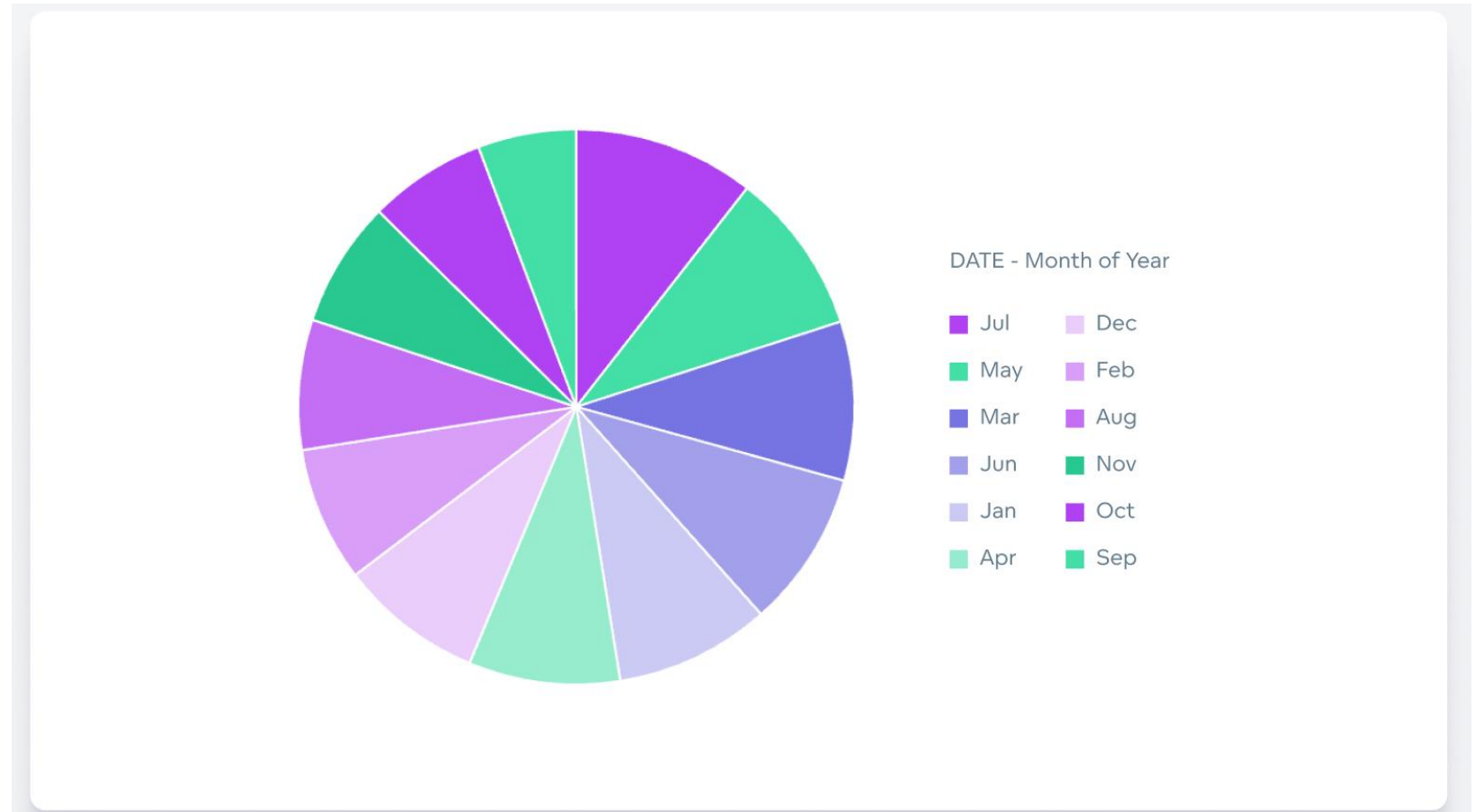
- Poorly chosen visualizations can distort the message of your data
- Impossible to identify any meaningful trends or patterns
- Try another chart type
- Data must be clear and understandable



# Misleading Pie Charts

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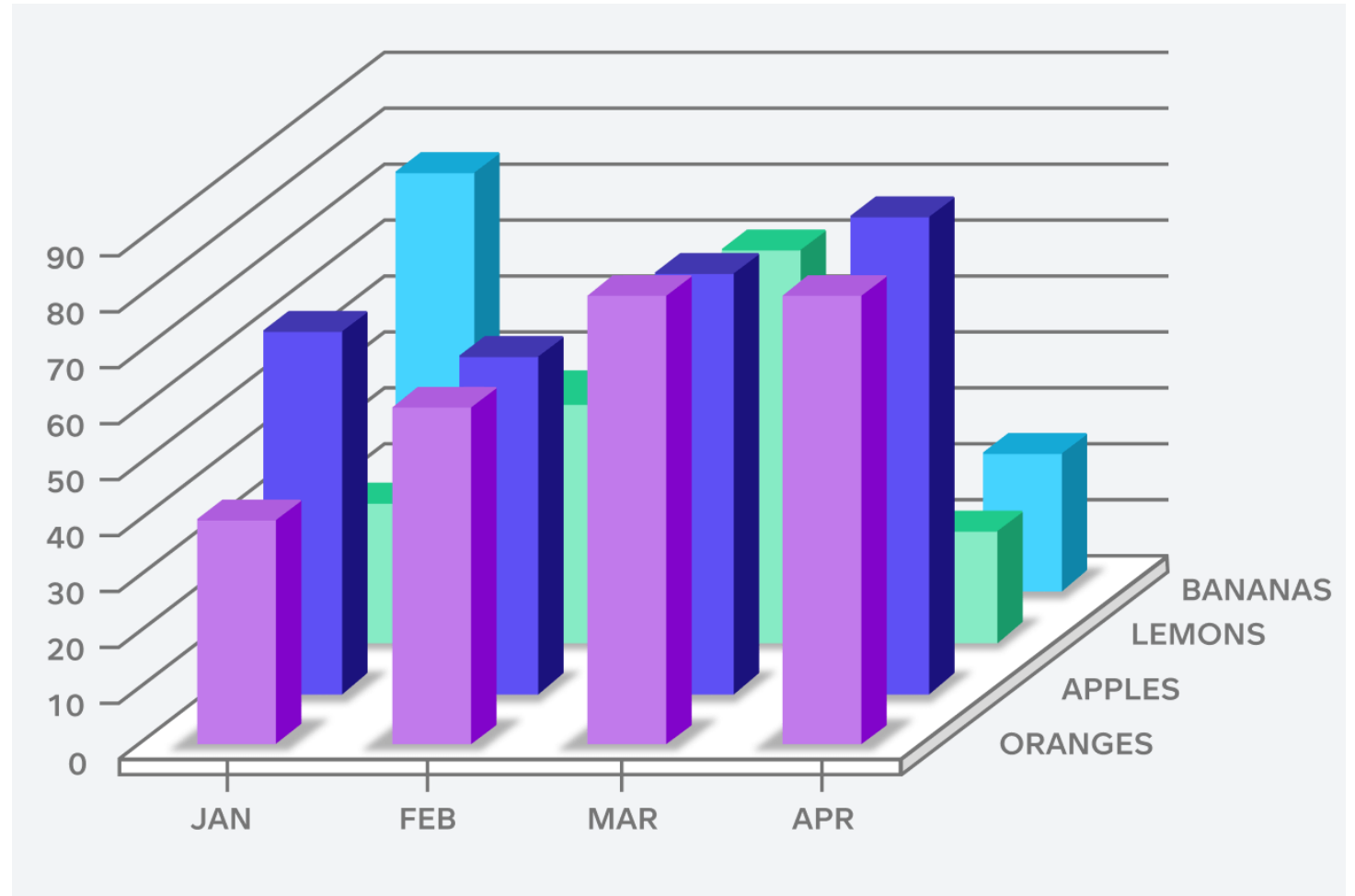
- Too many slices !
- Bad choice of colors !
- Differences are hard to distinguish
- Choose alternative visualizations



# Simplify Complex Data

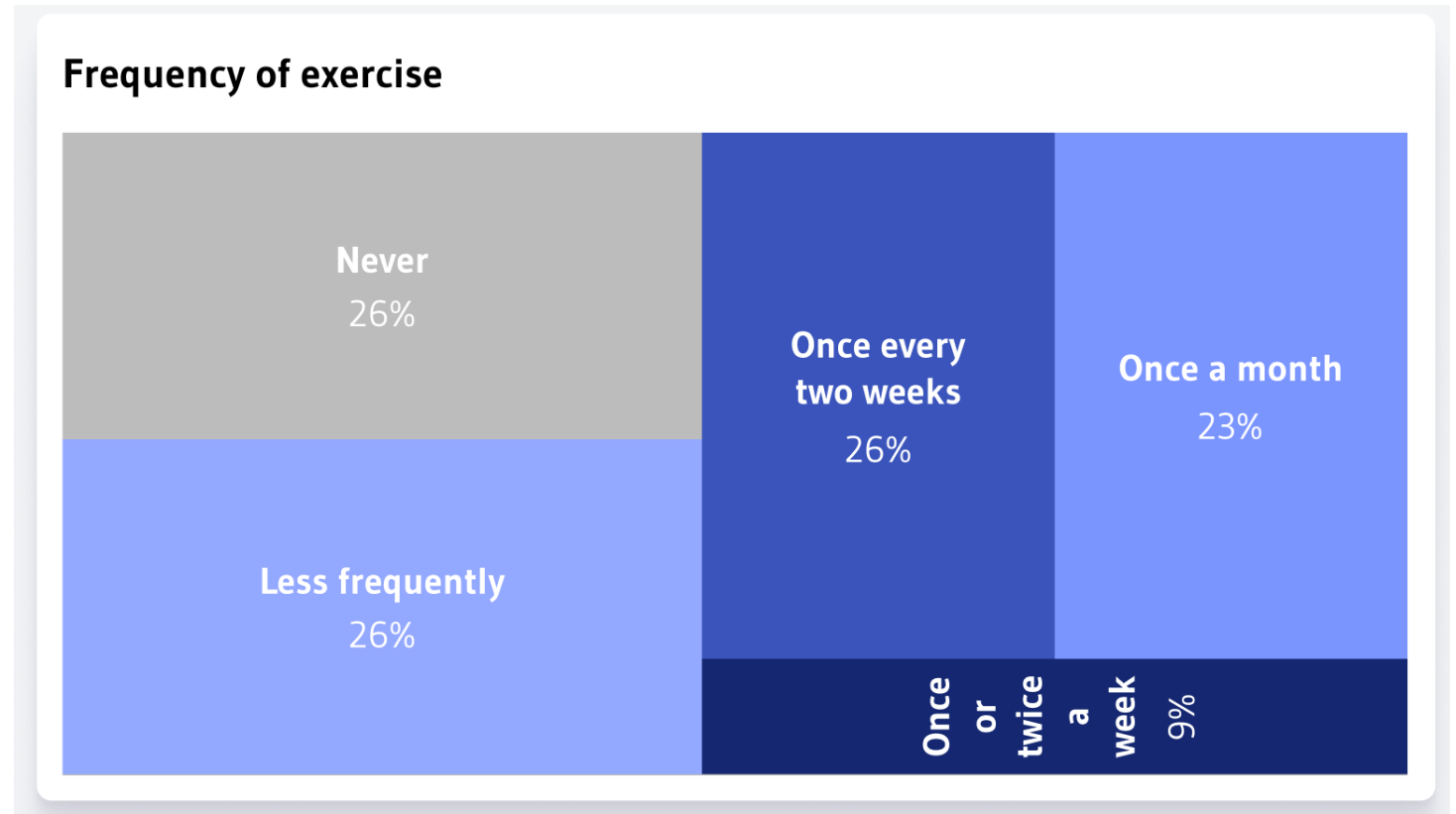
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- The excess of information is overwhelming
- Cluttered visuals obscure key insights
- Do not use 3D !
- Use interactive filtering !



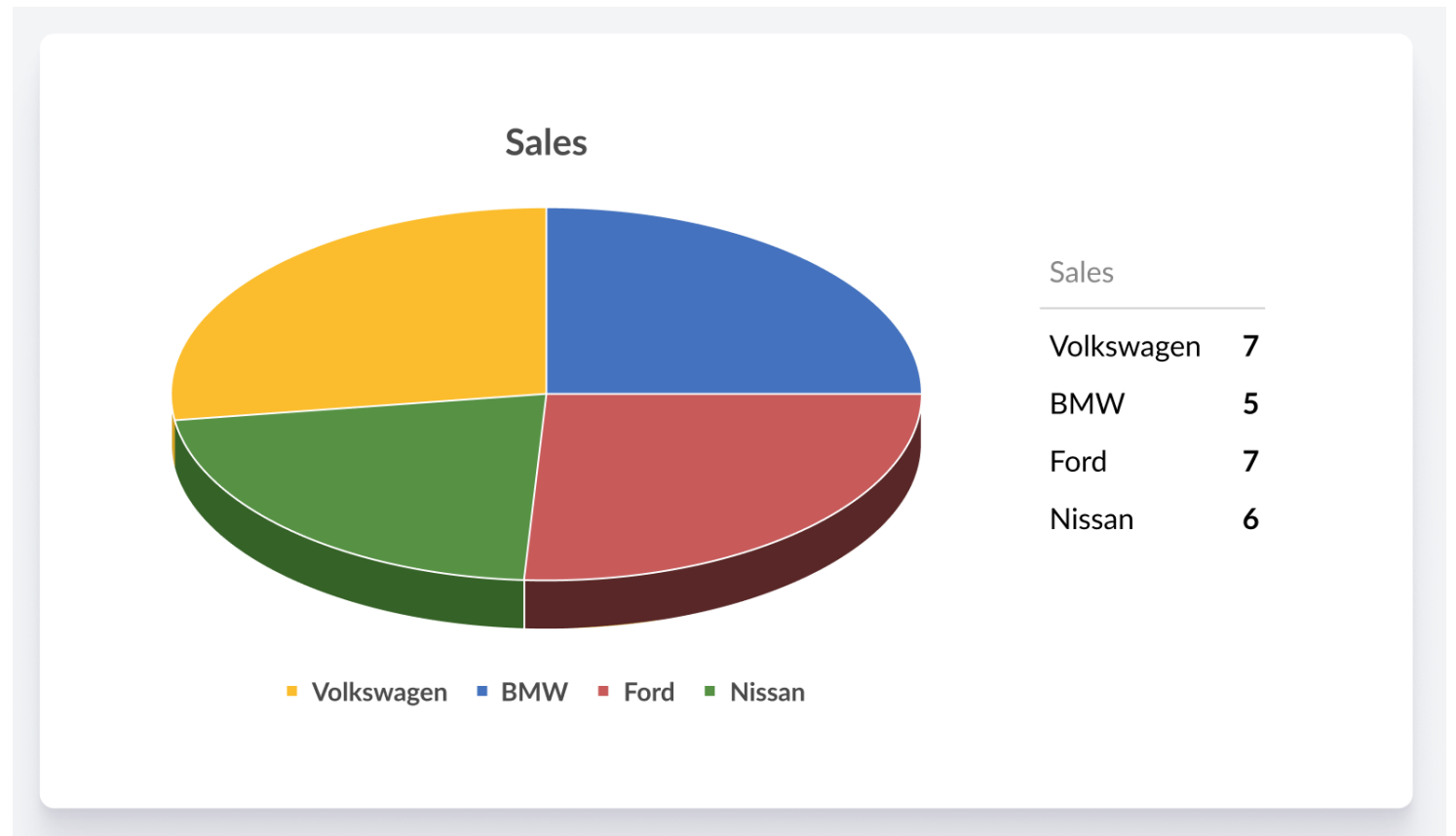
# Neglecting to Tell a Story

- What are the key insights or conclusions ?
- Viewers fail to understand the main message !
- Highlight the most important data points
- Organize the visuals in a way that guides the viewer



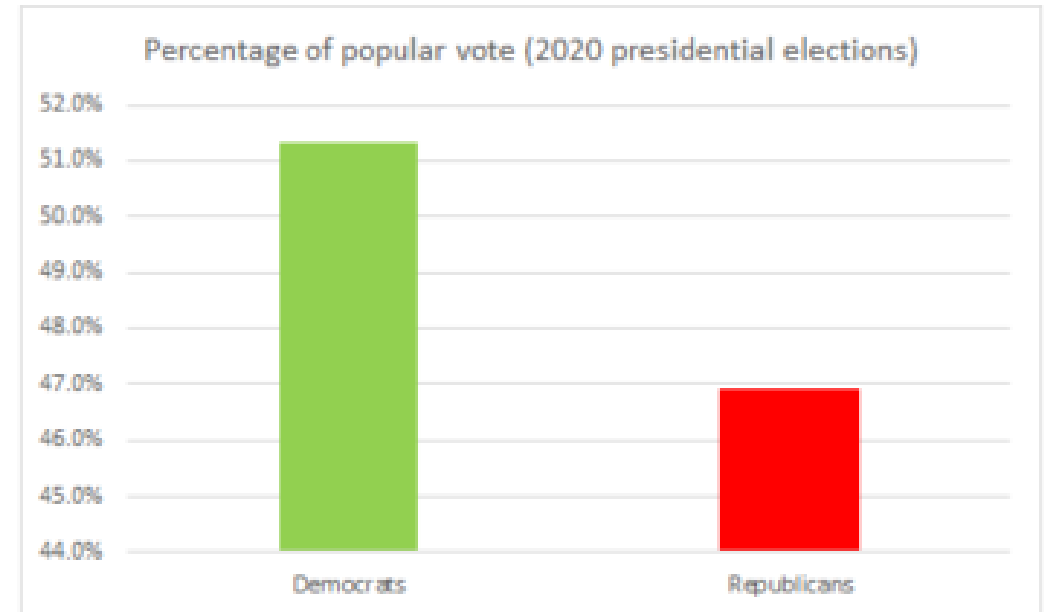
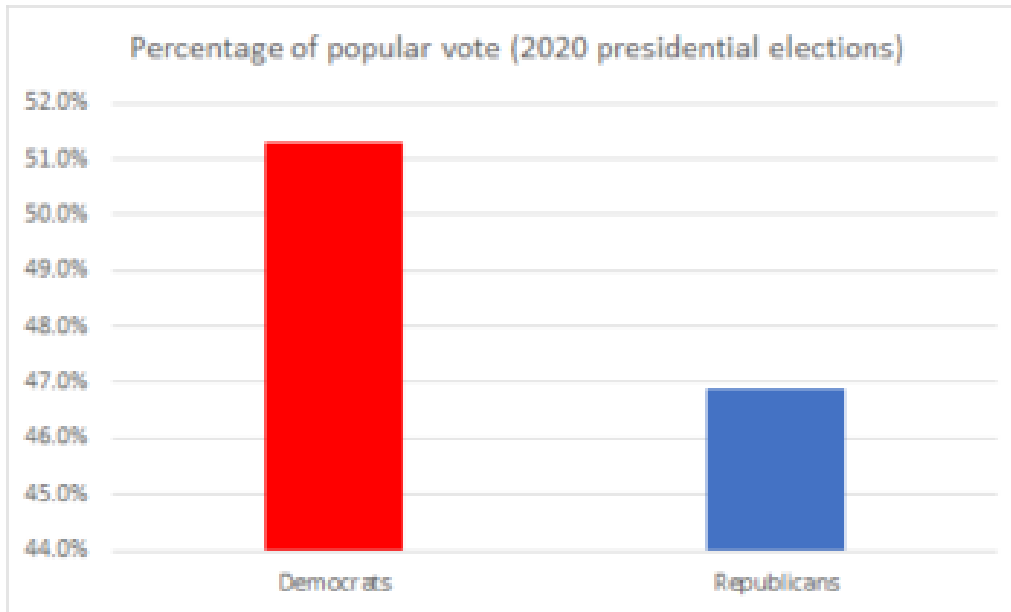
# Wrong Use of 3D

- Perspective distortion leads to wrong interpretation
- Whenever you're tempted to use 3D, don't !!
- What else can be improved ?



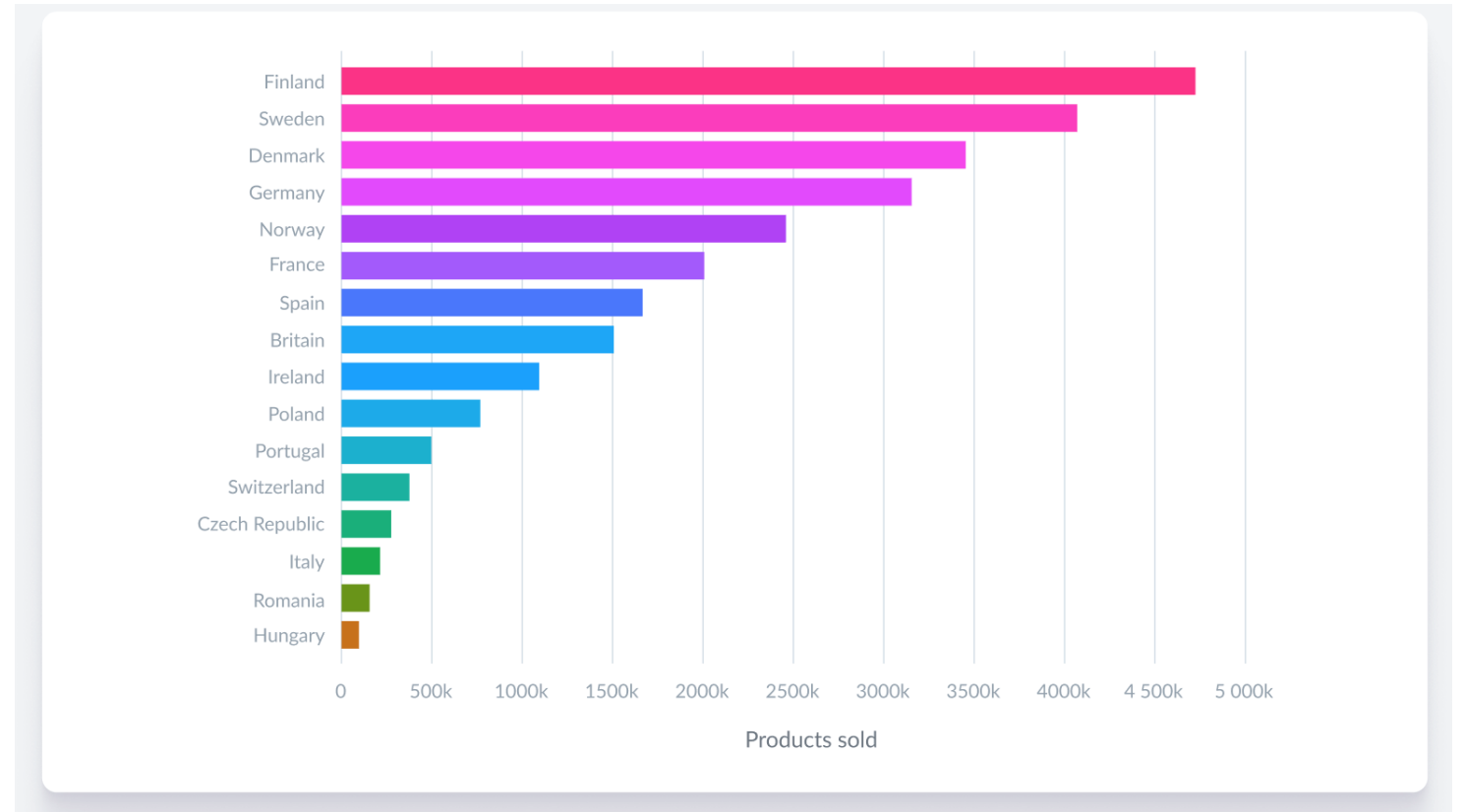


# Good Color Choice ?

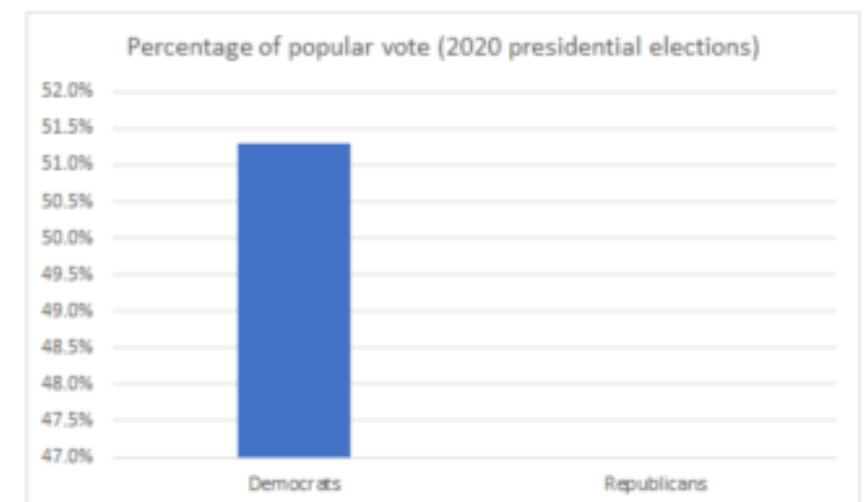
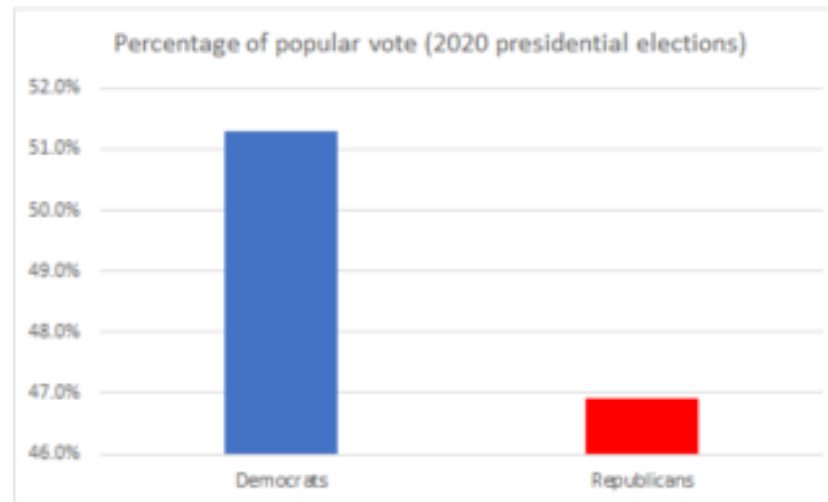
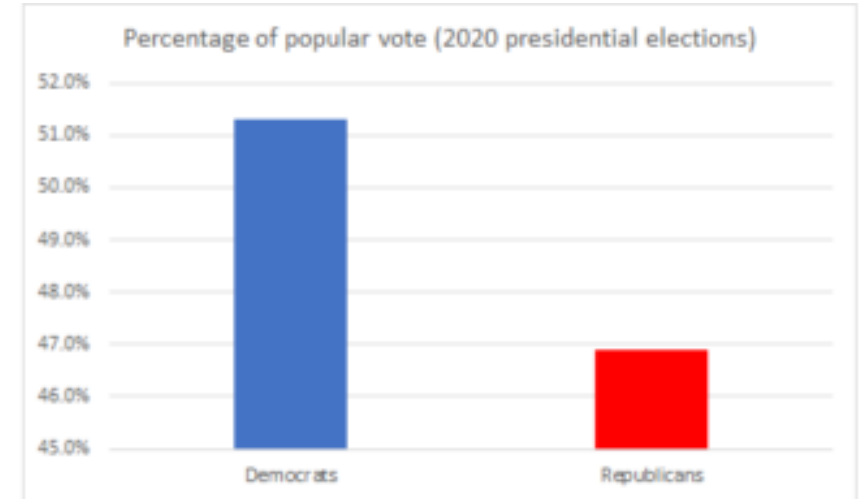
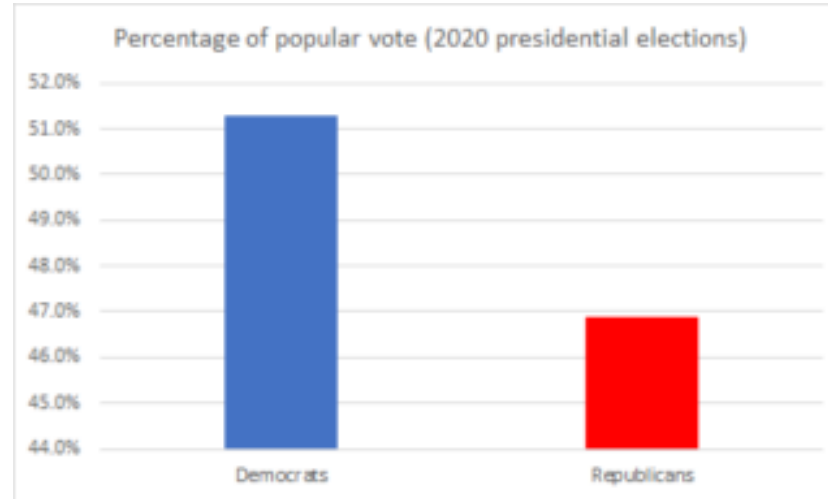


# Bad Use of Color

- Random color assignment
  - Aesthetically pleasing...
  - NO added clarity !
  - Visual NOISE !
- 
- Color is never a decoration !!



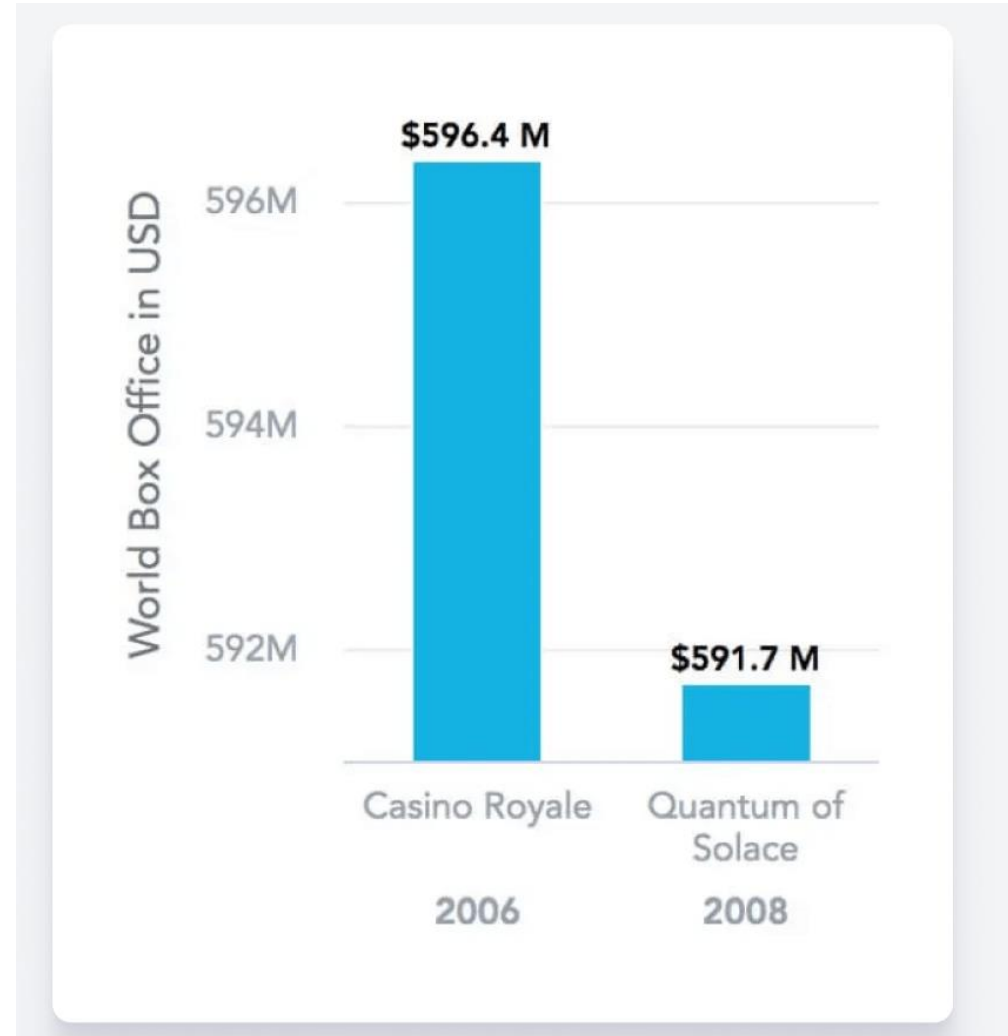
# Vertical Axes !?!



# Truncated Vertical Axis

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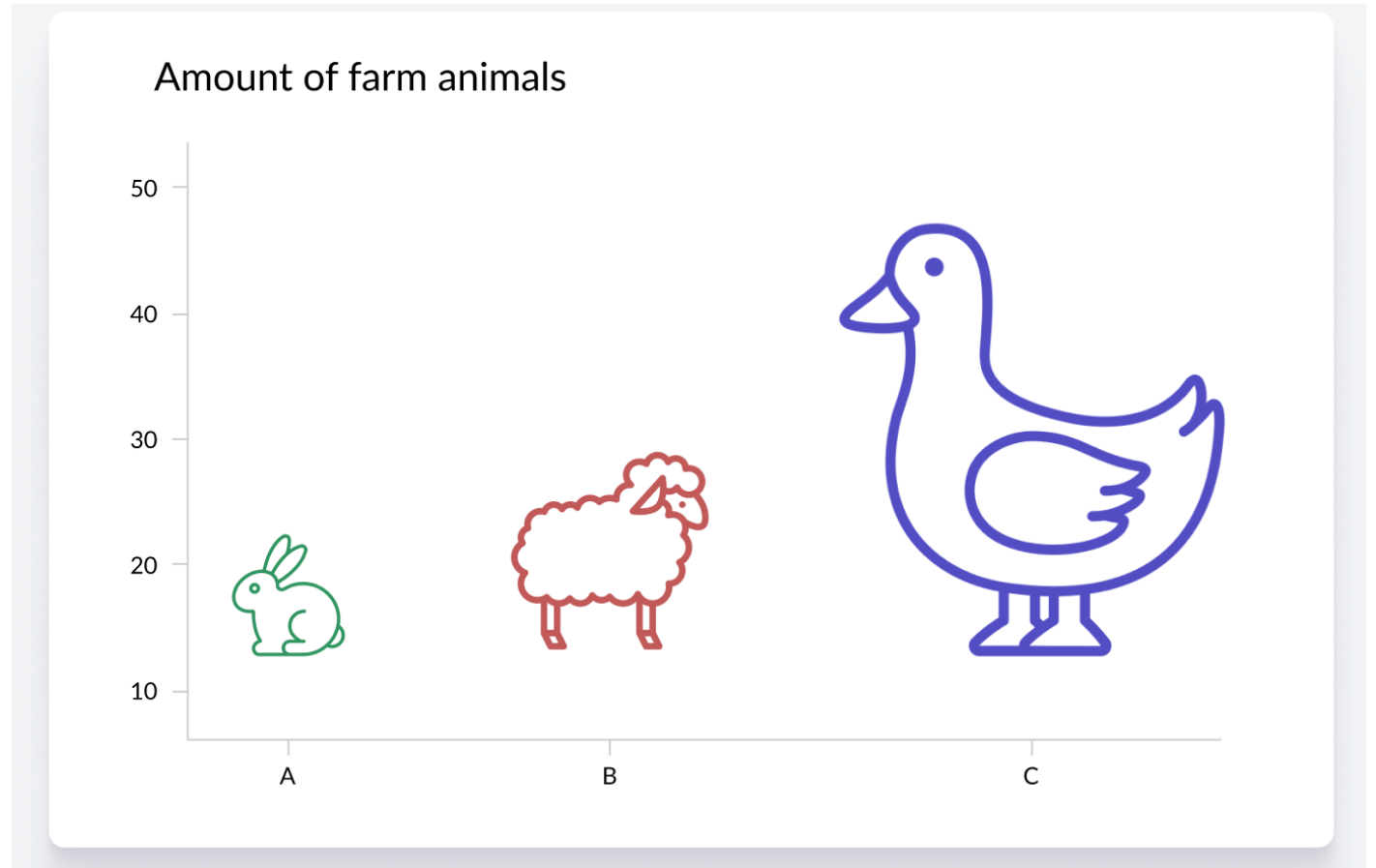
- Difference is exaggerated
- Disparity appears greater than it is
- Leading to an inaccurate conclusion
- This is sometimes done intentionally !



# Misleading Scale

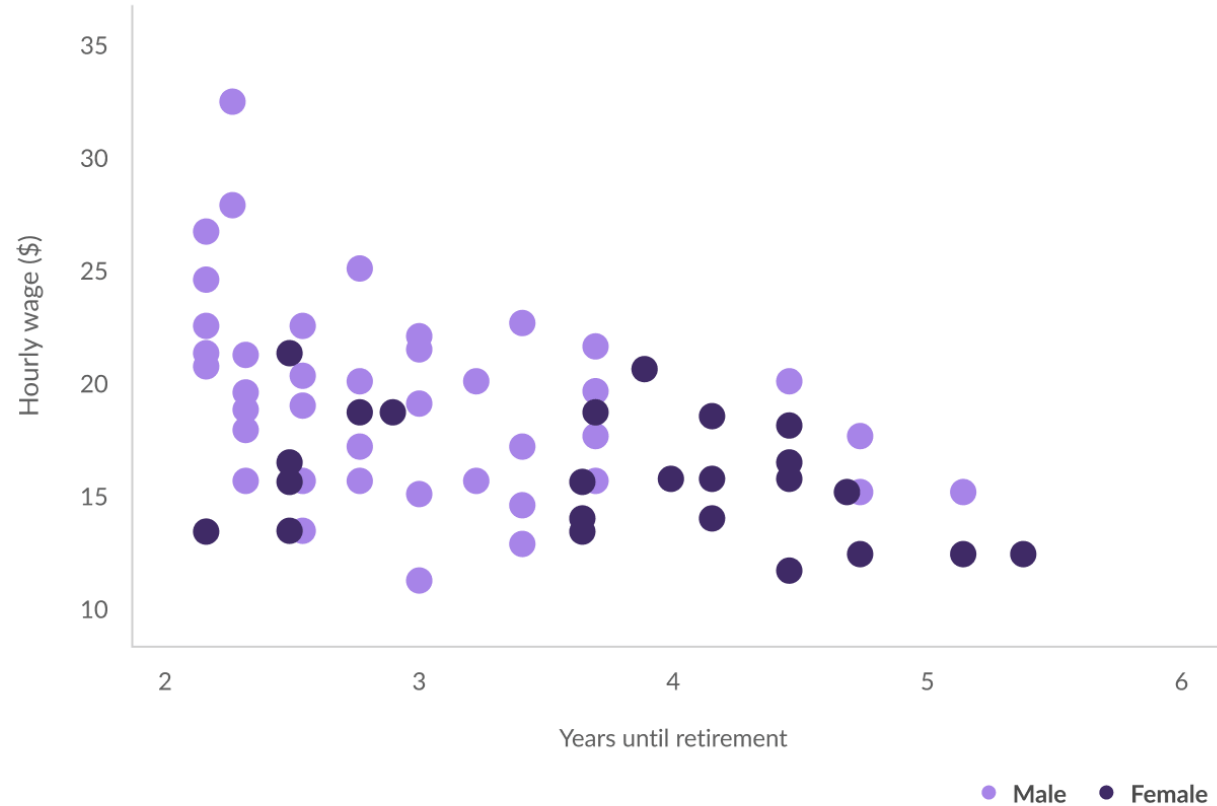
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- Size brings no contribution
- The viewer draws incorrect conclusions !
- Keep the relative scales consistent



# Overlapping Elements

- Difficult to discern specific values
- And understand the distribution and relationships within the data
- Adjust the transparency and/or employ different shapes and sizes



# References

- <https://profspeak.com/data-visualization-gone-wrong/>
- <https://www.gooddata.com/blog/bad-data-visualization-examples-that-you-can-learn-from/>