

1

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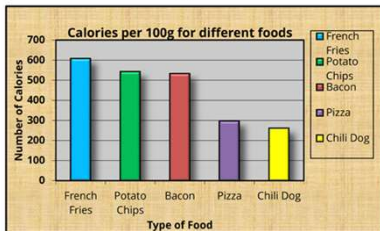
4

5

6

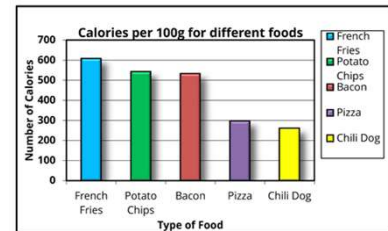
The **data-ink ratio** is the proportion of **Ink** that is used to present actual **data** compared to the total amount of **ink** (or pixels) used in the entire display. (**Ratio of Data-Ink to non-Data-Ink**). Good graphics should include only **data-Ink**. **Non-Data-Ink** is to be deleted everywhere where possible.

Remove backgrounds



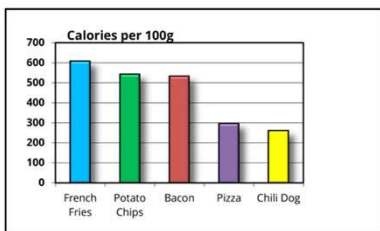
7

Remove redundant labels



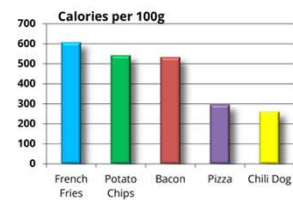
8

Remove borders



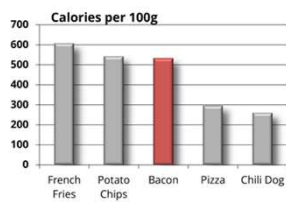
9

Reduce colors



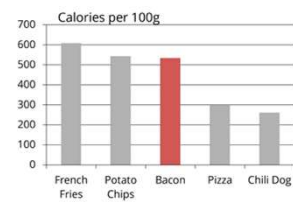
10

Remove special effects



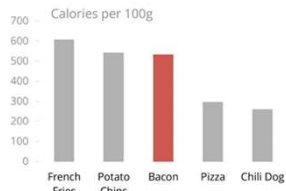
11

Lighten labels



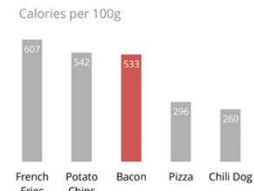
12

Direct label

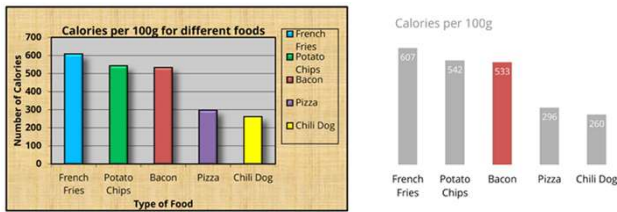


13

Direct label

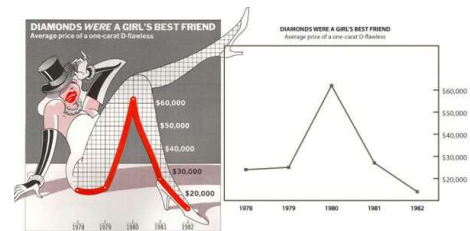


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Impactful Visualization



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Impactful Visualization

	A	B	C	D	E
1	Date	Apple	Intel	Amazon	IBM
2	10/18/2016	118.18	57.53	822.11	150.02
3	10/19/2016	117.25	57.47	820.4	151.27
4	10/20/2016	116.86	57.5	811.99	151.26
5	10/21/2016	116.81	60.28	809.36	150.58
6	10/24/2016	117.1	59.94	824.95	150.4
7	10/25/2016	117.95	60.85	839.1	150.69
8	10/26/2016	114.11	60.81	832.76	150.71
9	10/27/2016	113.19	60.61	831.24	152.82
10	10/28/2016	113.87	60.01	782	154.05
11	10/31/2016	113.45	60.16	781.03	152.76
12	11/1/2016	113.46	59.97	799	151.5
13	11/2/2016	111.4	59.82	783.93	152.48
14	11/3/2016	110.96	59.53	765.05	152.31
15	11/4/2016	108.53	58.65	762.79	152.4
16	11/7/2016	108.08	58.78	771.64	153.99
17	11/9/2016	110.11	60.55	784.97	154.56
18	11/9/2016	109.88	60	764	152.96
19	11/10/2016	111.09	60.48	778.81	157.66
20	11/11/2016	107.12	58.23	755.71	159.97
21	11/14/2016	107.71	59.02	745.51	161.25
22	11/15/2016	106.57	58.33	730	158.42
23	11/16/2016	106.7	58.94	739.88	158.46
24	11/17/2016	109.81	60.41	749.32	159.22
25	11/18/2016	109.72	60.78	761	159.8

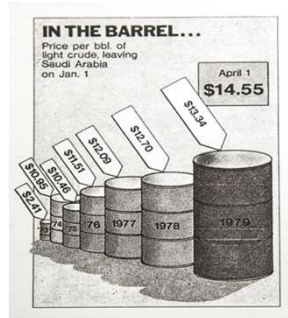
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Misleading Visuals

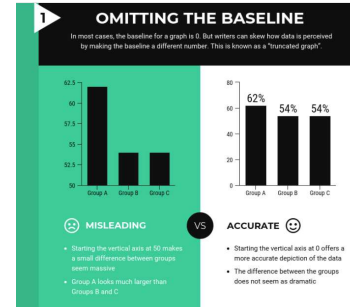
How to Lie with Graphs

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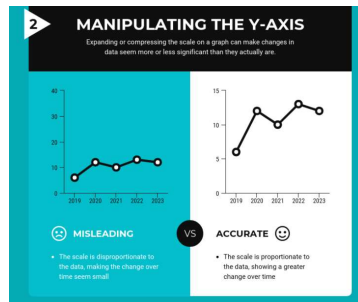
- Lie with your plot



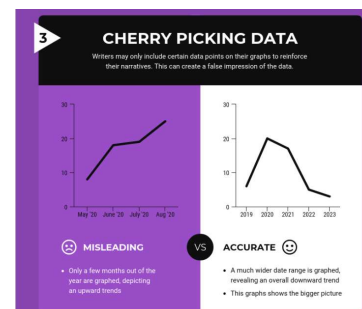
19



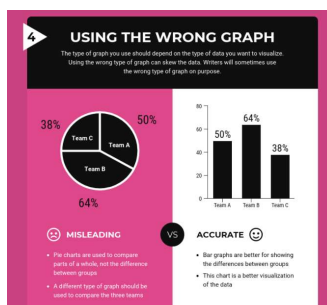
20



21



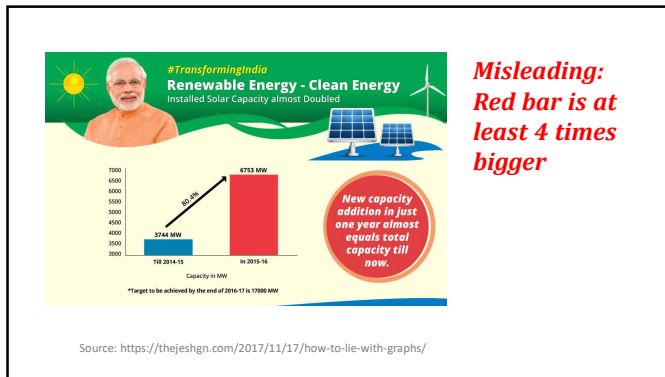
22



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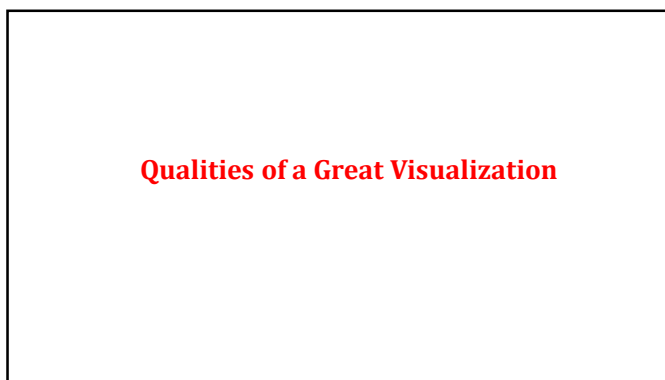
24



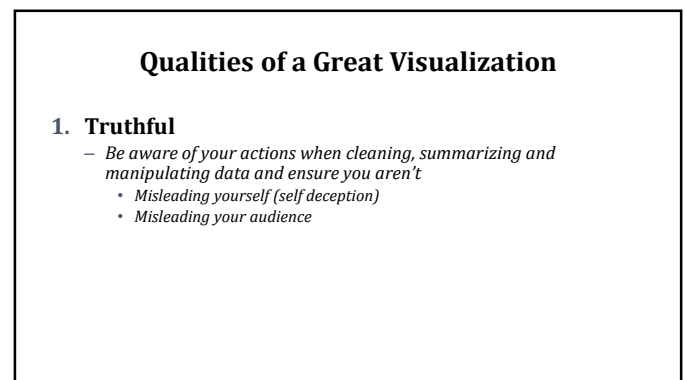
25



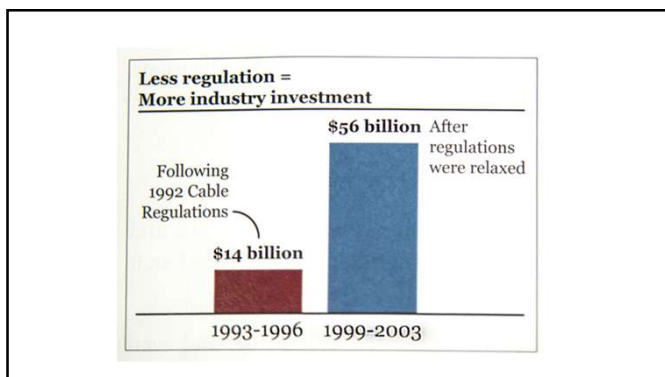
26



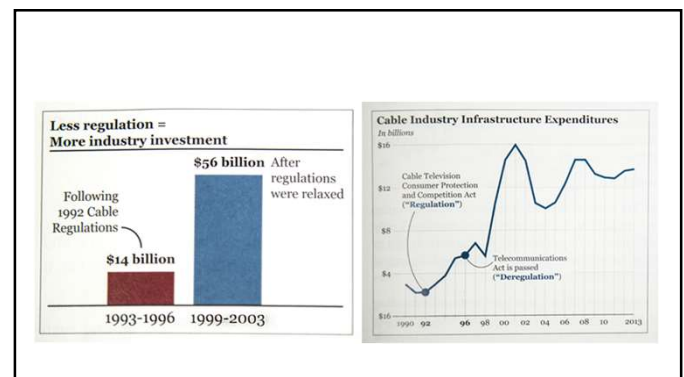
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Qualities of a Great Visualization

1. **Truthful**
 - Be aware of your actions when cleaning, summarizing and manipulating data and ensure you aren't
 - Misleading yourself (self deception)
 - Misleading your audience
2. **Functionality**
3. **Beauty**
4. **Insightful**
5. **Enlightening**
 - A combination of the previous four, but with a social ethical responsibility

Acknowledgements

1. Cairo, A. (2013). *The functional art: An introduction to information graphics and visualization*. Berkeley, CA: New Riders.
2. Coursera Course: Applied Plotting, Charting and Data Representation in Python; offered by Michigan University

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Go to the Coding Demo...

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To be continued in the next session.....

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