

DATA LITERACY ESSENTIALS

24 THINGS TO KNOW AND KEEP IN MIND

Basic Characteristics of Data

1. All data ultimately originates from a human source.
2. Consume data as critically as texts.
3. Numbers always have a context.
4. Numbers without clearly documented context will eventually cause problems.

Statistical Foundations and Intuition

5. Causality is not correlation.
6. Experiments are the only way to truly distinguish causality from correlation.
7. Statistics does not deal with “true” and “false,” but with probabilities.
8. Statistics can behave paradoxically.
9. Success rates mean nothing without corresponding failure rates.

Data Quality

10. There's no such thing as completely unbiased data.
11. Data quality is always relative.
12. More data does not equal better data.
13. Data not collected is data not available.
14. Data quality cannot be inferred from the data alone.
15. Accuracy is not the same as precision.

Analysis

16. Most data analysis seeks nuance, not simple answers.
17. The problem statement matters as much as the analysis.
18. “Almost the right data” or “almost the right question” will only produce an almost useful answer.
19. Data alone rarely answers a complex question.

Interpretation and communication

20. Visualization and storytelling are simultaneously essential and dangerous.
21. Anecdotes and examples do not constitute proof.
22. Implausible results can be more valuable than plausible ones.
23. Clarity doesn't always mean simplicity.
24. Drama can be spun from most datasets, even where none exists.

