



EECS E6893 Big Data Analytics

HW3: Data visualization

Tutorial II

Hung-Kai Huang
Fall 2026

Agenda

- Reader and main message.
- Evidence and chart design.
- Written story, limits and next step.

Audience and the Big Idea

Reader: a service desk manager

Question: what should the manager investigate next?

“April arrivals exceeded resolutions by 40 tickets, so the manager should investigate workload and workflow before changing staffing.”

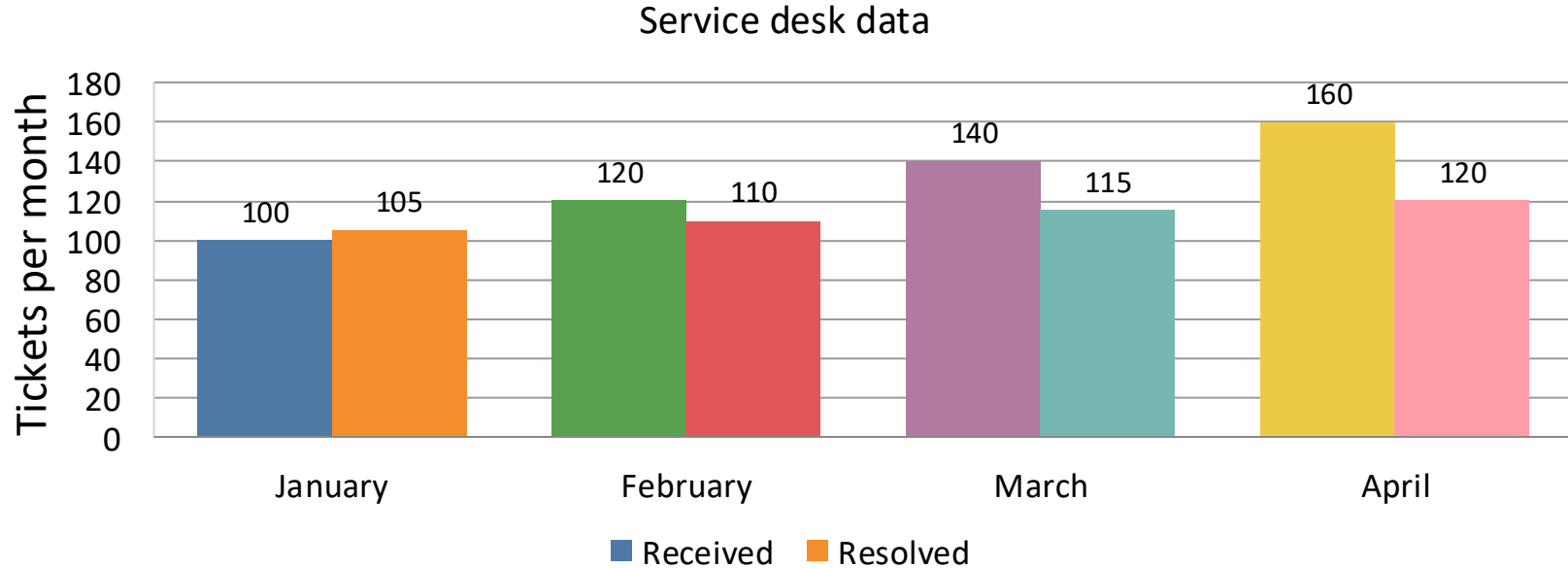
A Big Idea expresses a viewpoint and what is at stake in one complete sentence.

Evidence and chart choice

Reader needs to compare	Possible view
Change over time	Line chart with ordered time
Sizes across categories	Bars on a common scale
Exact values	A compact table with clear units

An interactive view should show the main finding before the reader uses its controls.

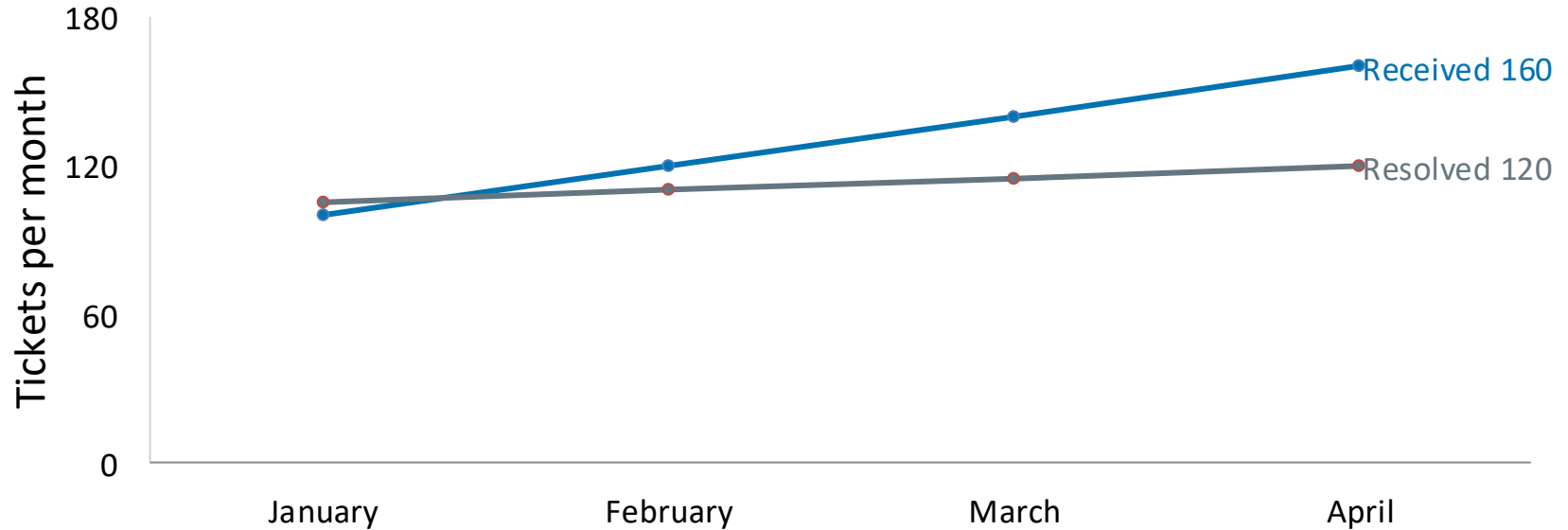
Before: Service desk data



Invented counts. Observe the figure silently before the presenter explains it.

After: Arrivals grew faster than resolutions

In April, arrivals exceeded resolutions by 40 tickets



Same values, four months and 0–180 range. The difference is a monthly flow.

SWD Ch.2, pp.45–47; Ch.3, pp.95–98. BDV Ch.2, pp.33–38.

Design changes and reader benefit

Change	Book connection	Reader benefit
Bars to two lines	SWD Ch.2: chart choice	Compare change over time
Headline and end labels	BDV Ch.2: text with graphics	Read the finding and identify series
Less grid and stable color	SWD Ch.3–4: clutter and attention	See evidence with less searching

Describe the original reading problem, the change and its effect.

SWD pp.45–47, 90–98, 117–119. BDV Ch.2, pp.33–38.

Story structure and limits

Part	Service desk example
Context	The manager needs to understand workload
Evidence	Arrivals grew faster than resolutions
Next step	Investigate workflow before changing staffing

Limit: monthly totals do not reveal the cause, waiting time or initial backlog.

References

Cole Nussbaumer Knaflic

Storytelling with Data

Ch.1 and 7. Chart design: Ch.2–4.

Jonathan Schwabish

Better Data Visualizations

Ch.2–3. Further examples: Ch.13.

Chapter and page references accompany this tutorial.