

Presentations

SURE 2025

Department of Statistics & Data Science
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Timeline

EDA project presentation

- 6-min presentation on Tuesday, June 17 (during lab)
 - aim for 5 min + 1ish min for Q&A
 - make sure you do not exceed 6 min (practice and time yourself)
 - I'll cut you off if you exceed 6 min

Capstone project presentation (a preview)

- 2 presentation checkpoints (both during lab time)
- 1 final presentation on the final day (July 25) (+ other deliverables)
- Details will be provided soon

Presentation tips

Begin with background and motivation

Every presentation has a **story**:

- What is the motivation? Why should people care about your work?
- You want to build up what your work is trying to address

Example: **Ron's nflWAR talk at NESSIS 2017**:

- Do **NOT** begin with: “We’re introducing [project topic]” (WAR for NFL)
- Instead begin with current state of NFL analytics and need for better, reproducible player level-metrics

Do **NOT** include an outline slide!

- Your presentation should flow naturally

Or you can begin with a “creative” intro...

Describing the data

You want to provide a general overview of your dataset:

- What are your observations? i.e., what does each row of your dataset represent?
- What are the relevant variables/features? i.e., what are the columns of interest?
 - Be careful though with many variables - avoid just listing everything!
 - Simplify by describing groups of variables together

Use examples - makes your data explicit and concrete for the audience

- But do **NOT** print out raw **R** console output or screenshots of output!
- Use text or a clean formatted table (via e.g., **knitr**, **DT**, **gt**, etc.)

Introducing and describing methods

- Prior to presenting results, you want to clearly state any transformations and methods used in the analysis
- Your presentation should provide the general steps for someone to replicate your work
 - e.g., Used complete-linkage hierarchical clustering with [INSERT VARIABLES], determined k number of clusters by [INSERT REASON]
 - e.g., Modeled [INSERT RESPONSE VARIABLE] as a function of [INSERT EXPLANATORY VARIABLES]
- For more complicated methods, you'll want to provide a brief review of the methodology
- If introducing new methodology: **walk through the steps clearly**
- **Always justify your choice of methodology**
 - Why you used a flexible tree-based model over linear regression

Presenting results

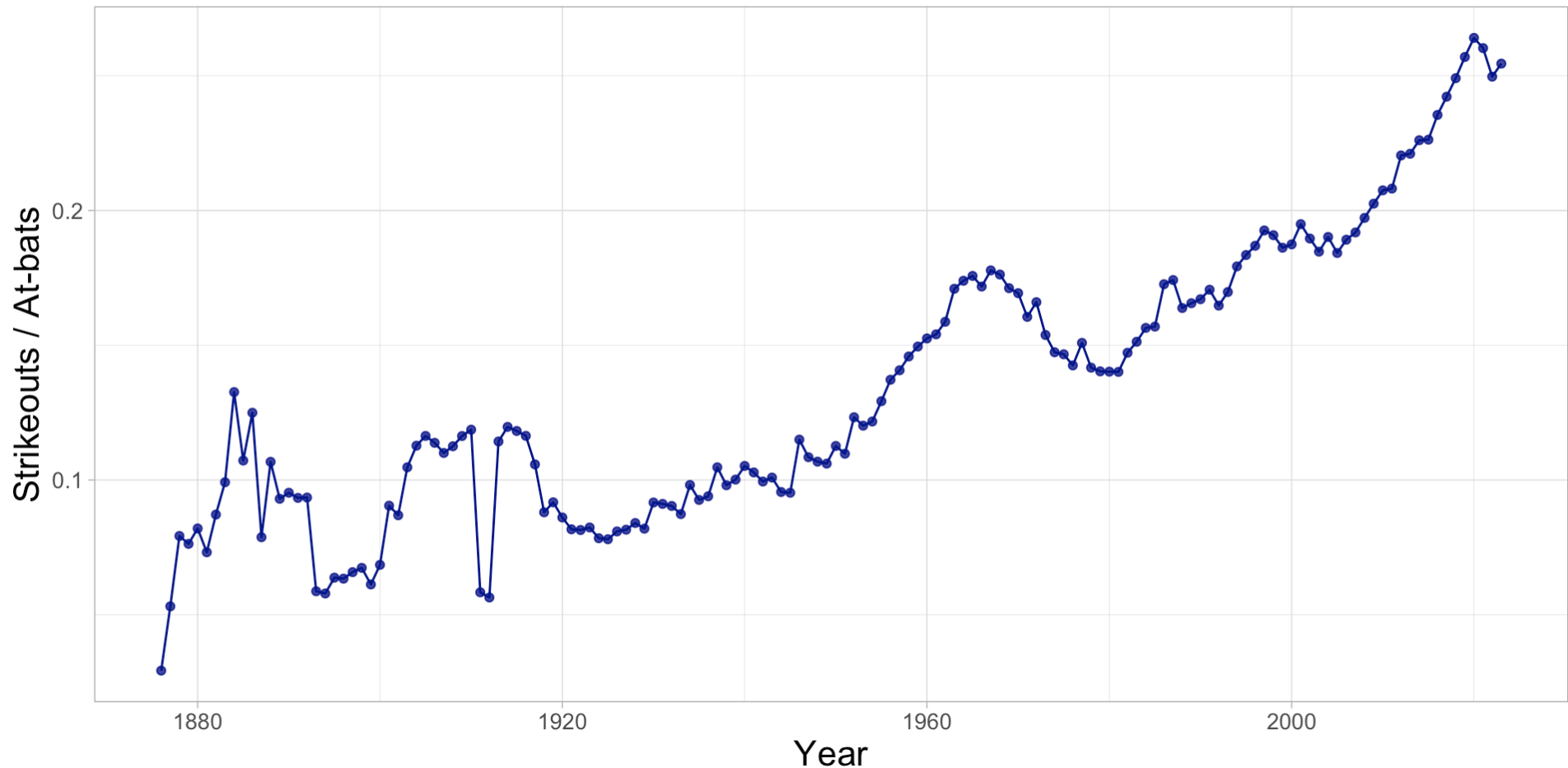
- Use the **assertion-evidence** model
- **Assertion**: title of the slide should be the key takeaway in brief sentence form
 - Indicates the point of the visualization or whatever means used to display the results
- **Evidence**: the body of the slide containing the results
 - Display of the results in some format that is simple to explain and understand
- Limit the amount of text in your **Evidence** portion - brief statements with important context
- Treat the **Assertion** as the title of your **Evidence**
 - Plot titles are then redundant and not necessary with an effective assertion

Assertion

Evidence

(e.g., plots, animations, tables, etc.)

MLB strikeout rates have been increasing throughout history



(Explain the elements of your graph - what is each axis, color, shape, etc referring to? And what is the unit scale?)

Discussion (and ending a presentation)

- Conclude with a recap of the main points of your work
- Then point out **limitations** and indicate **future directions**
- Either end with the **Discussion** slide (or **Acknowledgements** but this is sometimes placed at the beginning)
- Never end a presentation with lone *Thank you* slide!
 - Either want the audience to focus on the final points in your **Discussion** slide
 - Or show a plot that stood out from your presentation (pretty picture!)
- Include back-up **Appendix** slides with additional info, ready for questions
- Slides for **References** should not be displayed during your talk
 - Their purpose is just for sharing with others
 - Alternative option: include references directly on slides either in text or via footnotes ¹

Additional tips and reminders

Use pauses effectively to highlight points and explain steps

- Showing all of your text at once can overwhelm your audience

But

don't

be

ridiculous

Remember: **memory overload is real!**

- Do **NOT** introduce too much notation at once
- **Repetitive language and usage of words are useful and reminders for the audience**
 - Use consistent language and terminology throughout the talk

Know your audience!

Design tips

- Less ink, less ink, less ink
- Your plot should be big enough (font size, line width, point size, etc.)
- Reformat variable names (don't show the original names in the data)
- If a table can be represented by a figure, turn it into a figure (e.g., comparison of model evaluation metrics)

More general tips

Your slides should support what you say, not create interference between speech and vision brain areas – your slides serves as a summary of what you said so someone who may have been distracted can catch up quickly.

Do not create your talk at the last minute (it will be obvious if you do). Designing good slides takes time. Practicing a talk takes time.

- **Advices from Andrew Patton:**

You don't need 17 decimal points for anything ever.

Make sure your figures and charts, etc. all display the correct size. If I have to zoom in 27 times to read the legends that's not going to help your case.

Pick better colors for your charts. Your submission should look expensive.

Do it live: presentation critique

Do it live: making presentations with Quarto

Resources to follow along

- Quarto presentation: quarto.org/docs/presentations
- revealjs: quarto.org/docs/presentations/revealjs

