

STRINGFESTANALYTICS

Or... PoweR BI



LEARNING OBJECTIVES

- R in Power BI: when and why?
- Setup
- Use cases
- Follow along: https://github.com/stringfestdata/satrday-r-power-bi
 - r-pbi-scripts.r: scripts used
 - r-pbi.pbix: completed PBI file



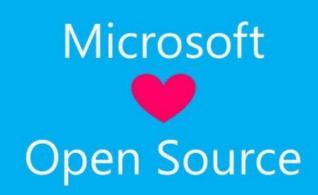
CHAT ME UP

- Do you use Power BI? How/when/why?
- Do you use R in Power BI? How/when/why?
- Pros/cons to Power BI vs Shiny?
- Brainstorm it! https://tinyurl.com/59hzc4ca



WHEN AND WHY

- Remote or unstructured data sources (APIs, images, audio)
- Feature engineering (missing values, PCA)
- Machine learning
- Regular expressions
- Advanced, custom visualizations



https://www.windowsblogitalia.com/2019/02/microsoft-migliore-futuro-inner-source/

SET UP

- Freemium, Windows only
 - Free account can run R scripts
 - Paid, <u>Pro account</u> is needed to publish R visuals

File > Options & settings >
Options > R scripting

Options

GLOBAL Data Load **Power Query Editor** DirectQuery R scripting Python scripting Security Privacy Regional Settings Updates Usage Data Diagnostics Preview features Auto recovery Report settings **CURRENT FILE**

Data Load

Privacy

Regional Settings

Auto recovery

R script options

To choose a home directory for R, select a detected R installation from the drop-down list, or select Other and browse to the location you want.

Detected R home directories:

C:\Program Files\R\R-4.0.2

How to install R

To choose which R integrated development environment (IDE) you want Power BI Desktop to launch, select a detected IDE from the drop-down list, or select Other to browse to another IDE on your machine.

Detected R IDEs:

R Studio

Learn more about R IDEs

Change temporary storage location

Note: Sometimes, R custom visuals automatically install additional packages. For those to work, the temporary storage folder name must be written in Latin characters (letters in the English alphabet).

Data: data/contestants.csv, data/personal_info.csv

What are the pre- and postintervention scores among each cohort of a study group?

- Import data via R script
- Identify invalid email addresses
- Visualize pre/post by group (slopeplot)

Follow along: demo-notes.pdf

DEMO





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Questions?



CLOSING THOUGHTS

- Use R only when Power Bl just can't
- Start in RStudio
- Get a <u>text expander</u> for your RStudio shortcuts



RESOURCES

- Wade, Ryan. Advanced Analytics in Power BI with R and Python. Apress, 2020.
- Zavarella, Luca. *Extending Power BI with Python and R.* Packt, 2021 forthcoming.



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THANK YOU

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