"R-driven Power BI" (satRday Columbus online presentation 2021)

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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

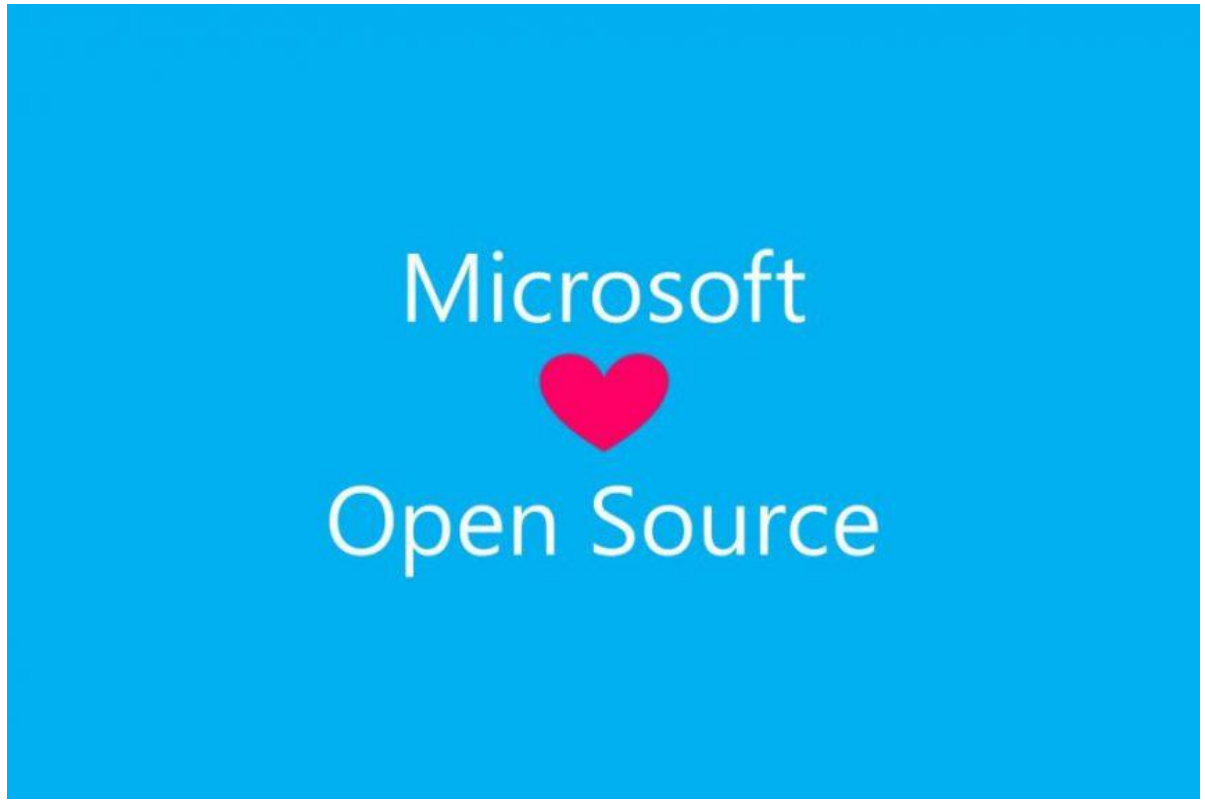
Chat me up

- 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

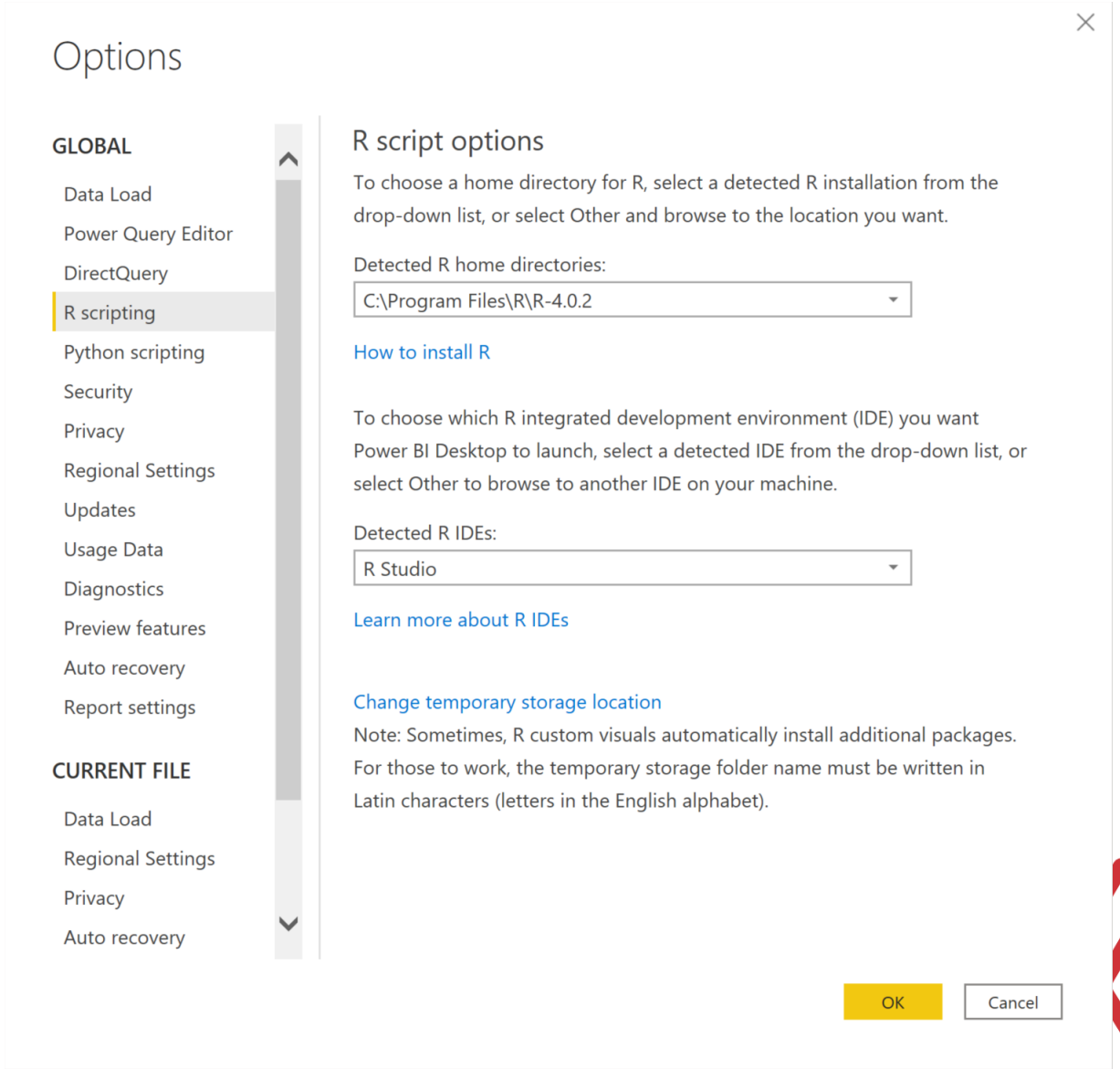


https://www.windowsblogitalia.com/2019/02/microsoft-migliore-futuro-inner-source/

SET UP

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

- File > Options & settings > Options > R scripting



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

What are the pre- and post-intervention 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 BI just can't
- Start in RStudio
- Get a text expander 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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