# R, What is it good for?
# Absolutely Everything

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Title homage: https://www.youtube.com/watch?v=dpWmlRNfLck

“Seriously, it’s good for everything”

*–Me*

industry, academia & fun….everything

# Good vs. Good

🔑

Key Presentation takeaways: Good does not mean great, but Good is better than bad. When we try to compare programming languages we tend to look at the surface components (popular developer influence or singular use cases or language development & design choices) and sometimes we forget the substantive (sometimes secondary) components of what can make a programming language appropriate for use, such as: **versatility, environment and inclusivity.**

I'll highlight each of these themes in the presentation *to show and not tell* of why R is good for everything!

# Hi Austin!

- Data Scientist @ Simple Finance
- Author of R packages: `ttbbeer`, `shinyLP`, `gramr`, `shinyGEO`
- Slides and Materials available on GitHub: jasdumas/talks/r-data-day-texas

# What is this talk about?

Real Gollum: This talk is about highlighting the practical, real and precious ways that R is useful and good for everything.

# What is this talk not about?

Fake Gollum: This talk is not about R vs. Python vs. Julia vs. Java vs. Cobol vs. Scala vs. Matlab vs. SAS….wait R is much better than SAS, but that’s another debate for another conference or any other hyped up topics.

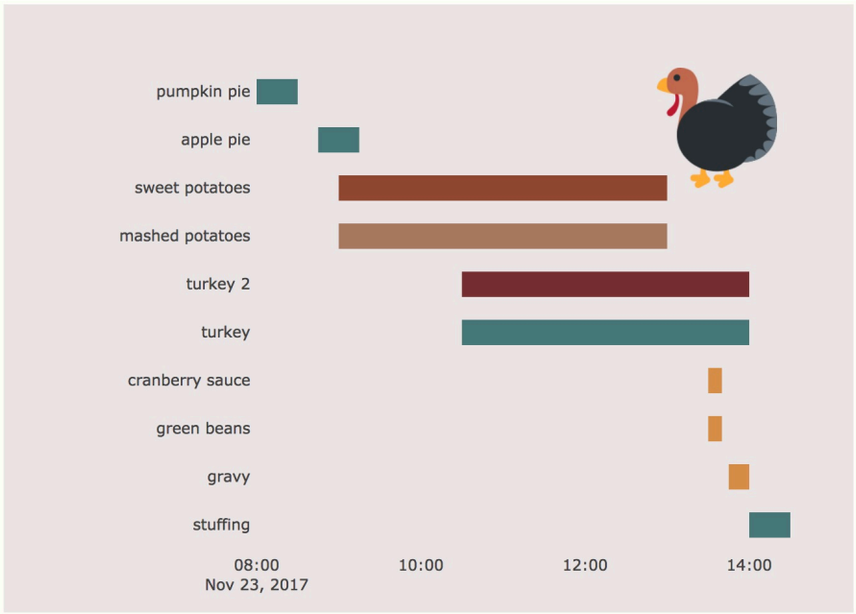
Examples of how R is versatile with cool projects:

- bathroom tiles
- turkey chart

# Bathroom Tile Design

ggplot2, dplyr, data.table, magrittr

https://www.r-bloggers.com/designing-our-bathroom-with-r/




# Thanksgiving Gantt Chart

googlesheets, lubridate, plotly

http://livefreeordichotomize.com/2017/11/12/thanksgiving-gantt-chart/

# more cool examples

packages

http://livefreeordichotomize.com/2017/11/12/thanksgiving-gantt-chart/

Examples of how R is more than an language but also an environment which makes it good for everything

# Fully planned and coherent system

R as a deliberate environment (https://www.r-project.org/about.html)

R is an integrated suite of software facilities for data manipulation, calculation and graphical display.

environment within which statistical techniques are implemented. R can be extended (easily) via packages.

# Storage

Small, medium, big data needs. Different data formats (csv, json, spss, sas, text, excel…)

… • an effective data handling and storage facility,

# Calculations

Familiar binary and logical operators

https://www.statmethods.net/management/operators.html

… • a suite of operators for calculations on arrays, in particular matrices,

handy pipe themed operators: %>%, %<>%, :%in%

# Data Analysis Tools

Tidyverse and more…

- a large, coherent, integrated collection of intermediate tools for data analysis,

tidyverse, dplyr, data.table, string (string manipulation), lubridate (date/time manipulation), sf (GIS/Spatial data), bioconductor (Bioinformatics), tidyquant (Financial), Environmental, Surveys…

# Graphs

Publication-ready and interactive

- graphical facilities for data analysis and display either on-screen or on hardcopy, and

pretty graphs FTW! ggplot2! plotly! htmlwidgets!

# Virtual Environments

R + Docker, Packrat

Like you know and are use to with python.
R in the cloud: https://hub.docker.com/u/rocker/
https://www.andrewheiss.com/blog/2017/04/27/super-basic-practical-guide-to-docker-and-rstudio/

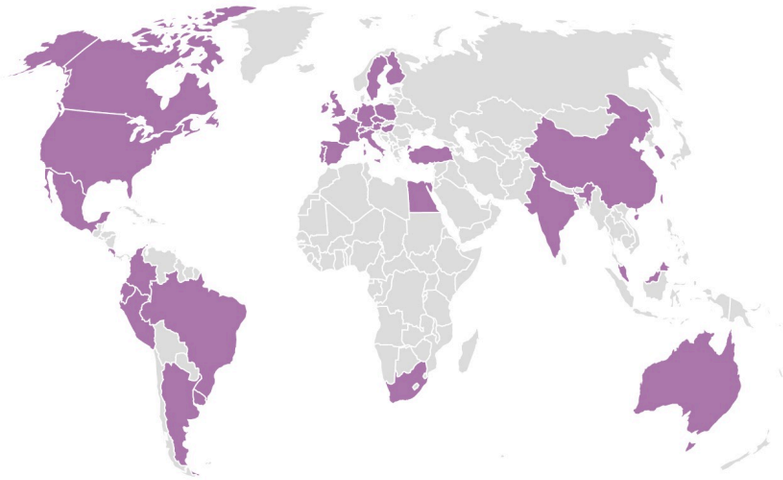
Examples of how R is inclusive, welcoming, and diverse.

# Forwards

http://forwards.github.io/

Leading the R community forwards in widening the participation of women and other under-represented groups.

http://forwards.github.io/about/



# R-Ladies

https://rladies.org/

R-ladies is a world-wide organization to promote gender diversity in the r community.

Its an amazing organization of inclusive and genuine people. And there a number of R-Ladies (and founder Gabriela!!!)  on the speaker panel today!

# #rstats

https://twitter.com/hashtag/rstats

The impact of the twitter R community!

# R-Bloggers

https://www.r-bloggers.com/

Blogging - https://www.r-bloggers.com/

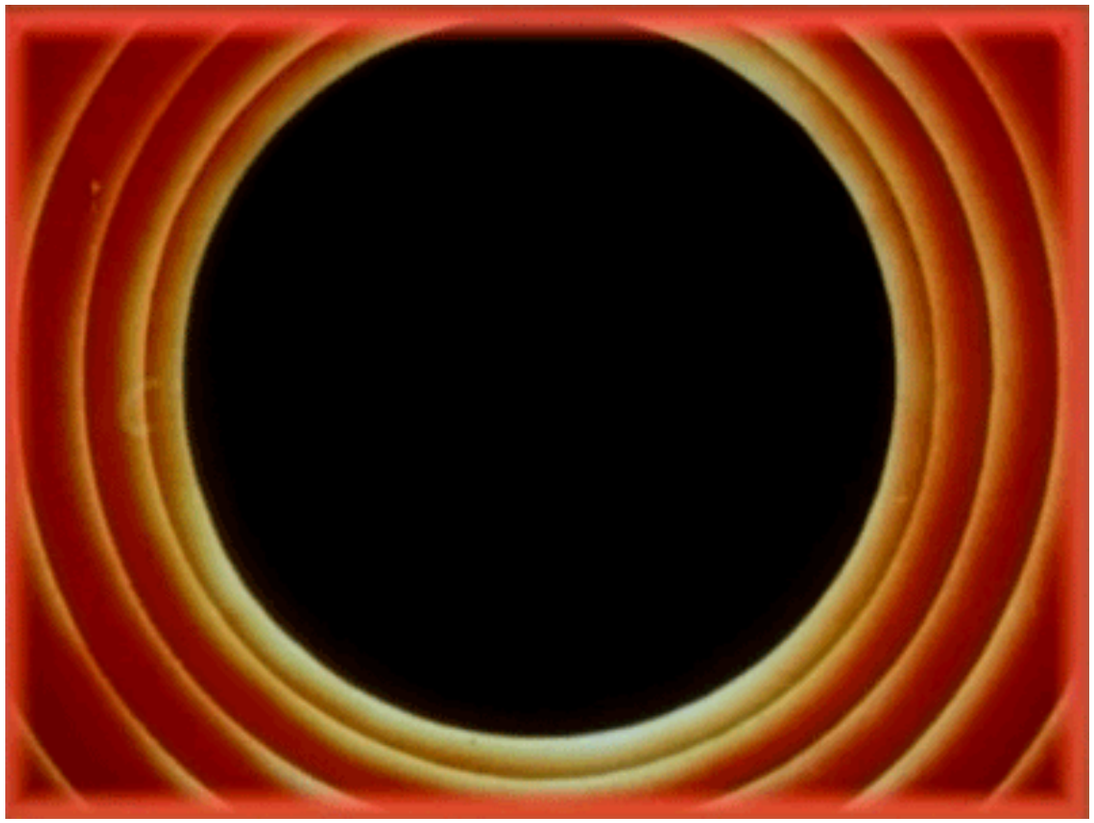
Live artifacts for sharing

# rOpenSci

https://ropensci.org/

unconf, packages review and community support
https://ropensci.org/

# R is good for...

Wrapping things up with a recap

EVERYTHING