

# OPEN DATA SCIENCE CONFERENCE



@ODSC

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Interactive Visualization with R

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# About me

- CTO of RStudio (glorified software engineer)
- Creator of Shiny
- Co-creator of htmlwidgets
- No stats, data science, or data viz background



# Demo 1

(Inspired by [a blog post](#) by Zev Ross)

# ggplot2 is great!

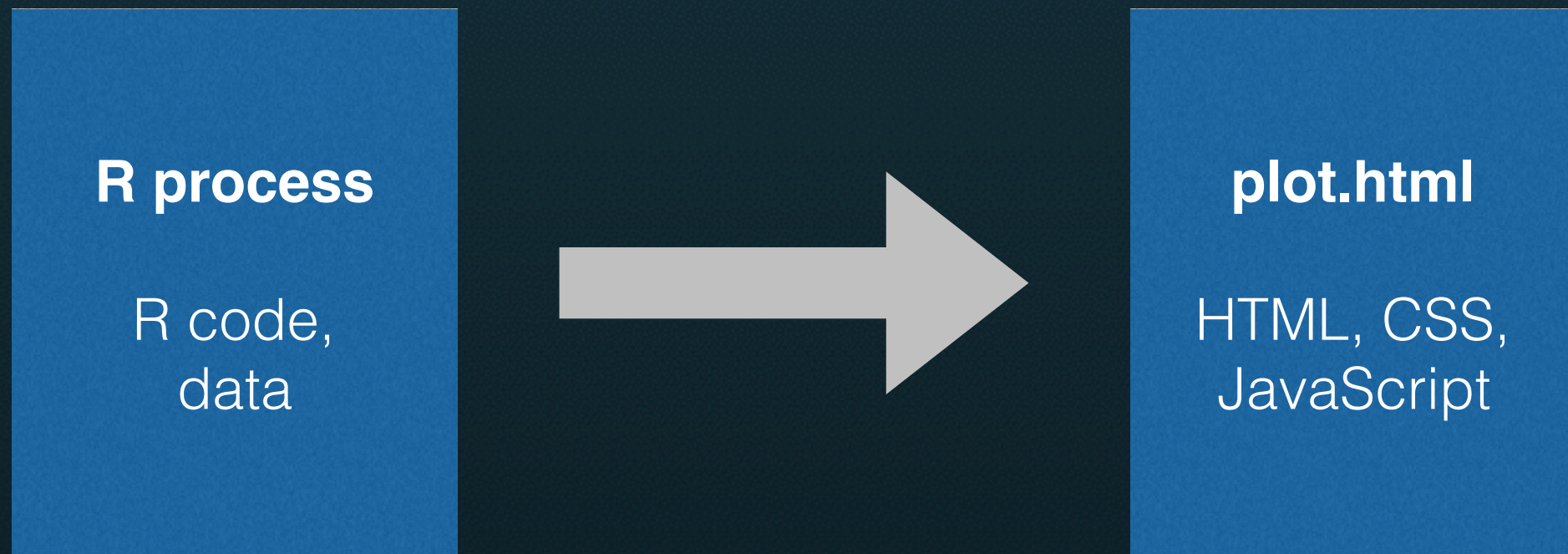
- Very concise plot specification
- Nice looking results, even by default
- One of the reasons people love R
- **But...**
  - Can't conveniently zoom or identify shapes
  - Enter Leaflet.js and the leaflet R package



# Demo 2

# HTML generation

Use data and R code and *export* them to HTML





# HTML generation

- Far from a new approach, in R or any other commonly used programming language
- Implementations are ad-hoc, monolithic
- Easy to get the details wrong (JS dependency management, offline use, resizing behaviors)

# htmlwidgets

- Created in collaboration with Ramnath Vaidyanathan and Kenton Russell, initially released in December 2014
- Provides a common foundation for invoking HTML/JavaScript widgets from R



<http://htmlwidgets.org>

# htmlwidgets

- Still uses an HTML generation approach, but no longer ad-hoc
- Can combine multiple widgets in a single page
- Encourages nice resizing behavior
- Use widgets in more places than just the console



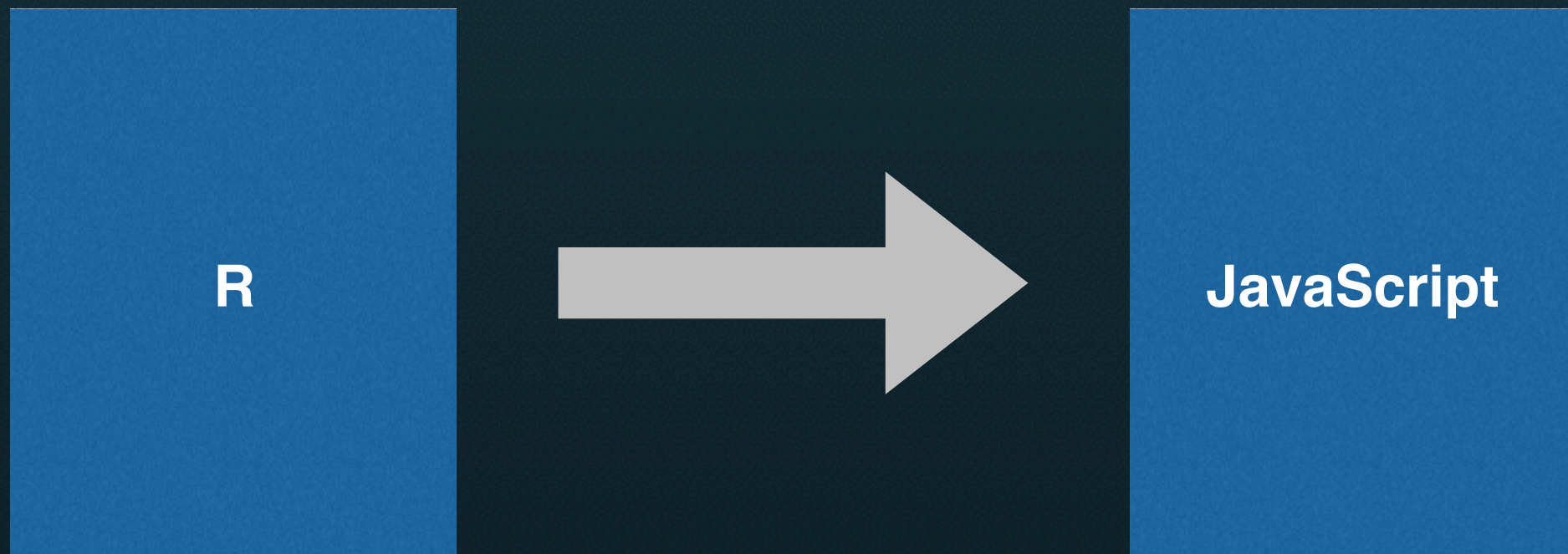
# Demo 3

Also, entire websites, e.g.:  
<http://rstudio.github.io/leaflet/>



# Demo 4

# HTML generation





# Shiny



# Demo 5



# RStudio HTML landscape

- `htmlwidgets`: interactive plots
- Shiny: interactive web apps
- R Markdown: document authoring format
- Each of these can stand alone, but also designed to work together in any combination

# To learn more

- [htmlwidgets.org](http://htmlwidgets.org)
- [rmarkdown.rstudio.com](http://rmarkdown.rstudio.com)
- [rmarkdown.rstudio.com/flexdashboard](http://rmarkdown.rstudio.com/flexdashboard)
- [shiny.rstudio.com](http://shiny.rstudio.com)

Slides and code:

<http://tinyurl.com/odsc2016-joe>



Thank you!

Questions?