R: A Tool, Not A Chore

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Overview

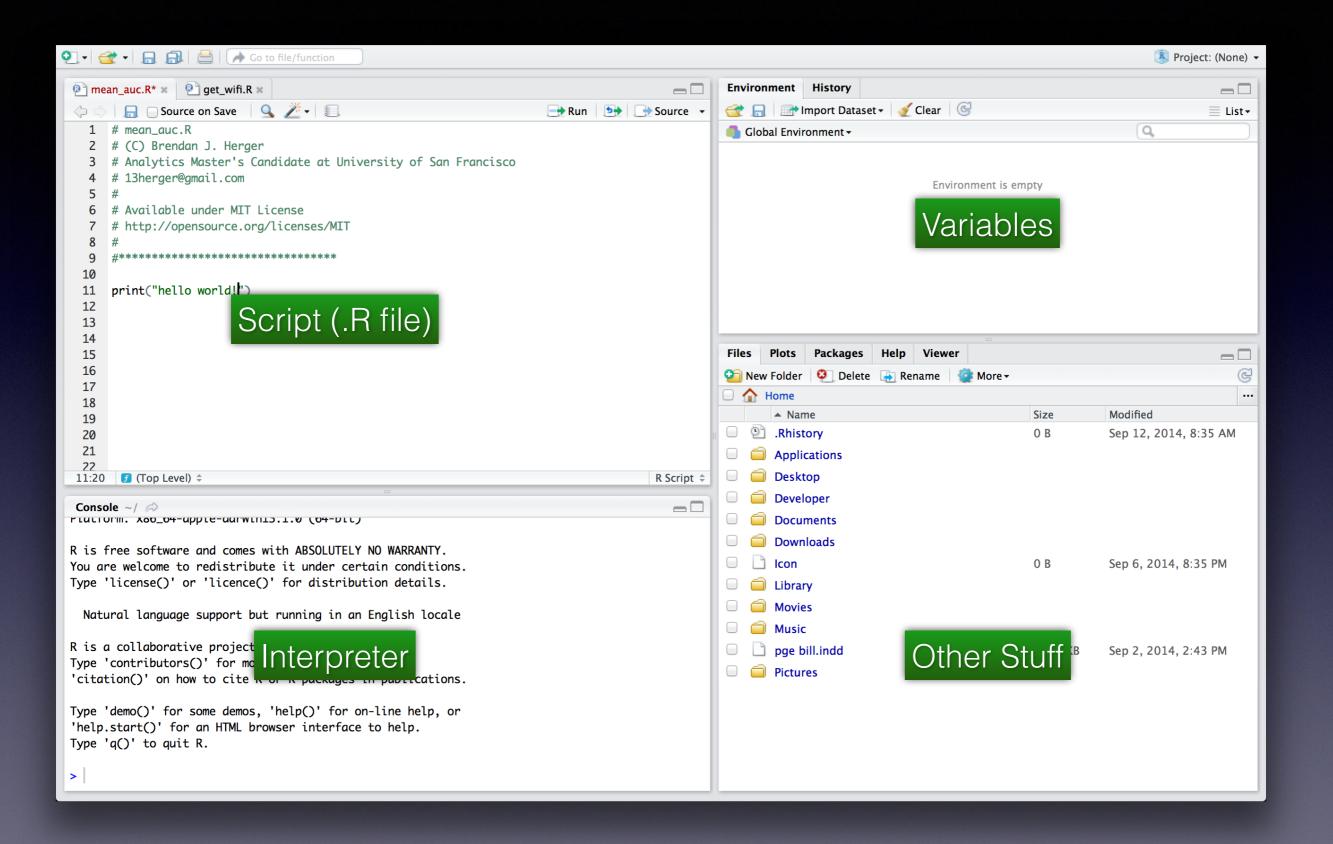
- Motivations
- Basic Terminology
- Case Study
- Wrap Up

Motivations

Why use R

- Compute mean by hand?
- Complex operations in excel?
- Calculations repeatable?
- Pretty graphs?

Basic Terminology



Convenient Functions

- typeof()
- print()
- ?function.name
- c("one", "two")
- paste("first", "second", sep = "")
- for (i in campaigns) { ... do something ...}
- rbind()
- cbind()
- apply(), sapply(), lapply()
- read.csv()

Data types

- character
 - "hello world"
- factor
 - like character, restricted to set of options
 - ex: ["January", "February" ...]
- numeric
 - 12, 12.5, 123456.7890
- logical
 - TRUE, FALSE
 - Must be all caps

For Loop

- SEE: r_loop() in example.R
- for (item in list){
 - print(item)
- }

Function

• SEE: r_function() in example.R

Data Frame

- SEE: r_dataframe() in example.R
- Functions:
 - data.frame(), names, lapply, as.numeric, as.character

Case Study

Case Study

- I would like to:
 - Read in data
 - Look at data
 - Find some interesting trends
 - Make some interesting plots

Wrap Up

Moving Forward

- Hopefully now you know all the answers you will ever need
 - or at least how to Google them!
- R is an amazing tool. It can also be an amazing pain.
 - "Penny wise, Pound foolish" if you take shortcuts, they will ruin you.