R Workshop I: Data Wrangling & Visualization

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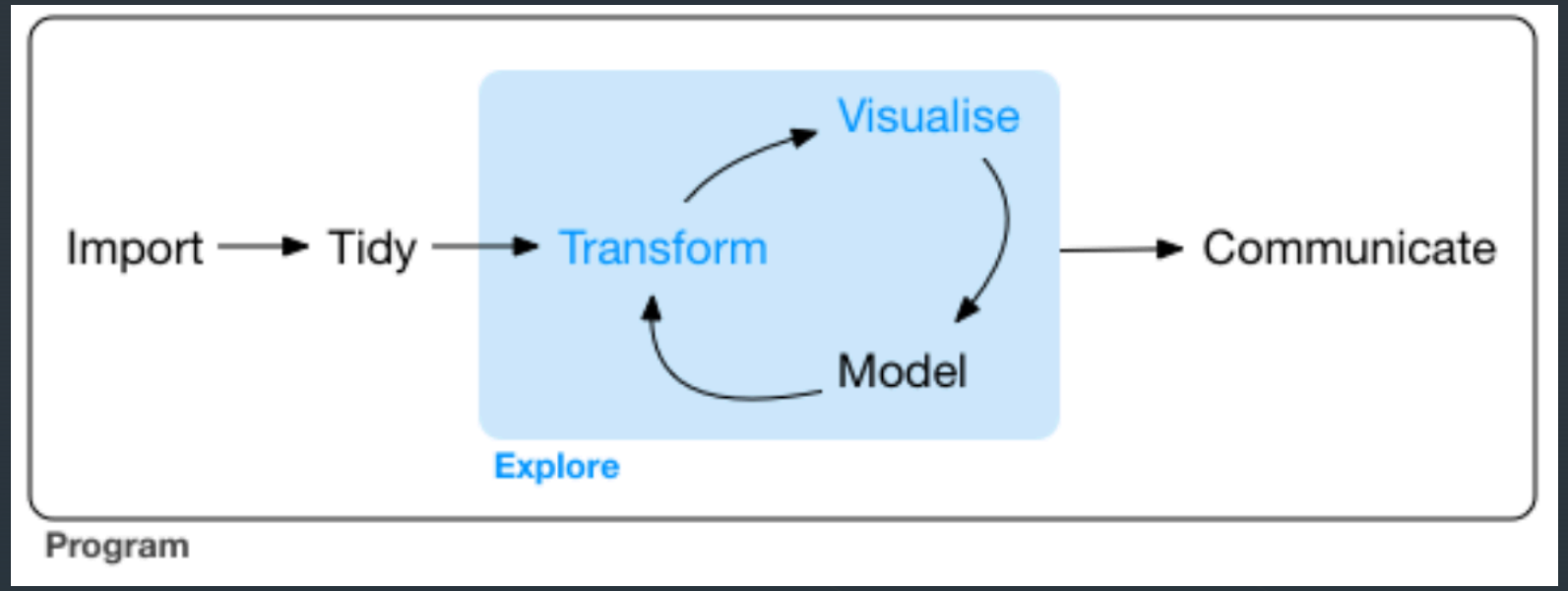
…should be called: Introduction to the Tidyverse

What is the Tidyverse?

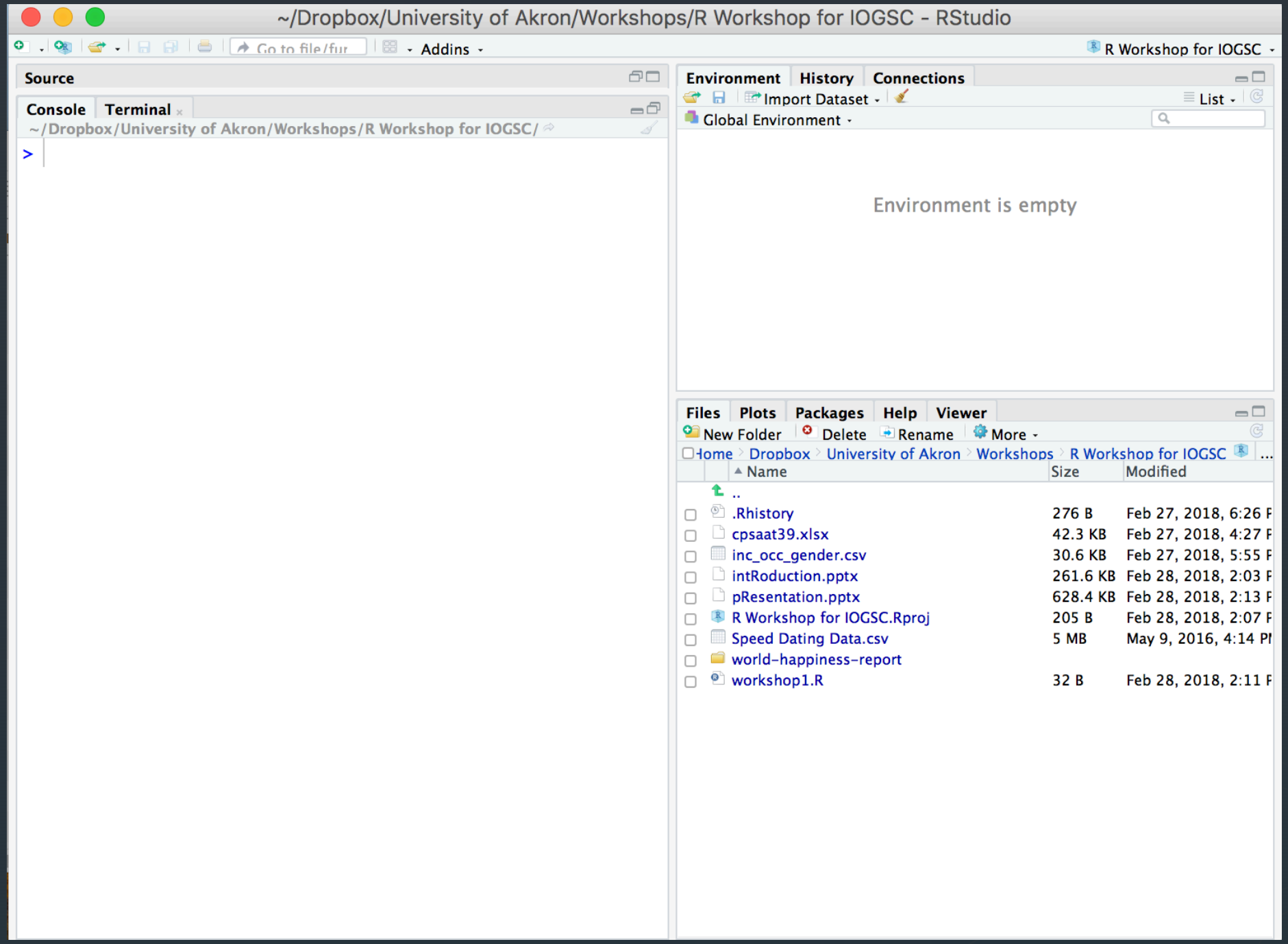
- A collection of packages by Hadley Wickham, Chief Scientist at RStudio
- A collection of tools based on Wickham's philosophy and approach to data science


Import
Tidy
Transform
Visualise
Model
Communicate
Explore
Program

Warming Up

Launching

- Open RStudio


~/Dropbox/University of Akron/Workshops/R Workshop for IOGSC - RStudio
Go to file/fur
Addins
R Workshop for IOGSC
Source
Console
Terminal
~/Dropbox/University of Akron/Workshops/R Workshop for IOGSC/
>
Environment
History
Connections
Import Dataset
List
Global Environment
Environment is empty
Files
Plots
Packages
Help
Viewer
New Folder
Delete
Rename
More
Home
Dropbox
University of Akron
Workshops
R Workshop for IOGSC
Name
Size
Modified
..
.Rhistory 276 B Feb 27, 2018, 6:26 P
cpsaat39.xlsx 42.3 KB Feb 27, 2018, 4:27 P
inc_occ_gender.csv 30.6 KB Feb 27, 2018, 5:55 P
intRoduction.pptx 261.6 KB Feb 28, 2018, 2:03 P
pResentation.pptx 628.4 KB Feb 28, 2018, 2:13 P
R Workshop for IOGSC.Rproj 205 B Feb 28, 2018, 2:07 P
Speed Dating Data.csv 5 MB May 9, 2016, 4:14 PM
world-happiness-report
workshop1.R 32 B Feb 28, 2018, 2:11 P

Explore the Console

- 1+1
- 1 + 1
- 2*2
- print(1+1)
- print(hello world)
  - What went wrong?

The R Language

- Object-Oriented
- Assign with:
  - **Alt + -**
- x <- 1
- x <- c(1,2,3,4,5)
- x <- matrix(c(1,2,3,4), 2, 2)

The R Language

- Manipulate objects with functions
- General form:
  - **function(argument1, argument2, …)**
  - print(x)
  - df <- data.frame(x)

The Environment

- Top right
  - Shows objects in current session
- Good practice to clear environment
  - rm(list=ls())

Files & Output

- Bottom right
  - File browser
  - Plots
  - Help
    - ?lm
    - ??lm

Saving Code

- Top left
- New R Script

R Projects

- Create projects to organize work in lieu of having various files floating around
  - New folder
  - Create R Project in that folder
  - Close RStudio
  - Open R Project

Getting Started with EDA

Download File

- Data on Employment Wages from BLS

Load Libraries

- library(tidyverse)
- library(”tidyverse”)