Data Visualization

Who are you?

I Still Don’t Know

Fill-out : Form

Why are We Here?

- To Develop a Personal and Intimate Hate/Love Relationship With R
- To Install Some Key R Packages
  - Tidyverse
  - Rmarkdown
- To Practice Coding via R Scripts
- To Learn Elements of ggplot2
- To Practice Making Visually Stunning Pictures that Change Lives

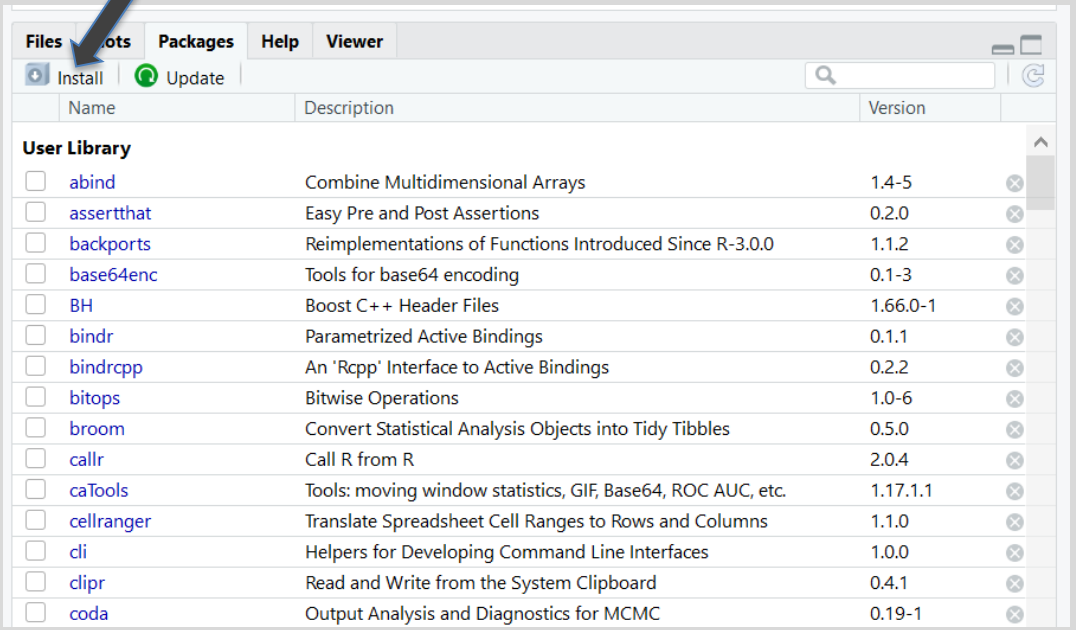
Initial Steps in RStudio

- Install Tidyverse Package

```
> install.packages("tidyverse")
```

- Other Packages To Be Installed
  - RColorBrewer
  - RMarkdown

Select Install and Search on CRAN

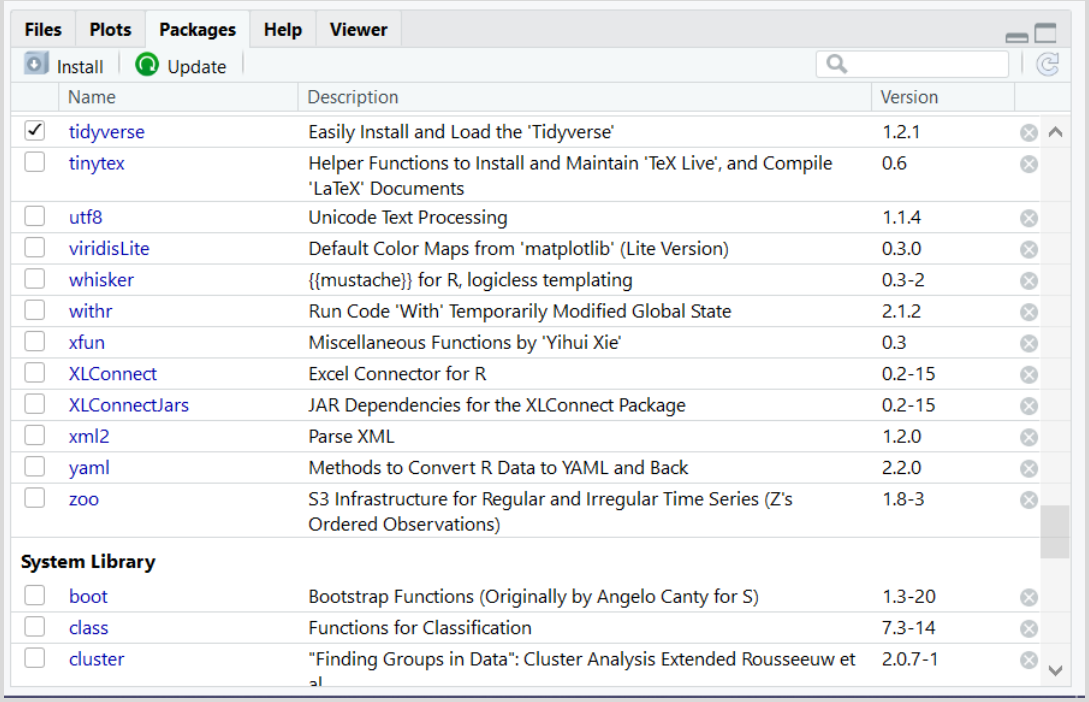


Initial Steps in RStudio

- To Use the Package
  - Code

```
> library("tidyverse")
```

  - Check Box for Tidyverse



ggplot2

- Help Page: Link
- Comes with Preloaded Datasets

ggplot2 part of the tidyverse Reference

Data

ggplot2 comes with a selection of built-in datasets that are used in examples to illustrate various visualisation challenges.

`diamonds`	Prices of 50,000 round cut diamonds
`economics`	US economic time series
`faithfuld`	2d density estimate of Old Faithful data
`midwest`	Midwest demographics
`mpg`	Fuel economy data from 1999 and 2008 for 38 popular models of car
`msleep`	An updated and expanded version of the mammals sleep dataset
`presidential`	Terms of 11 presidents from Eisenhower to Obama
`seals`	Vector field of seal movements
`txhousing`	Housing sales in TX
`luv_colours`	`colors()` in Luv space

ggplot2

- Many Useful Plots and Charts Provided
  - See Cheat Sheet: Link
    (Also on Course Website)
  - Identified as Geoms (Geometric Objects)
- Organized by Type of Data
  - Univariate
  - Bivariate
  - Mixtures of Categorical and Numeric
- ggplot2 General Form
  - The geom you choose has to comply with the type of variables you are analyzing

```
> ggplot(data=DATA) +
    geom_TYPE(mapping=aes(x=XVAR,y=YVAR, etc.))
```

- Fill in blanks from dataset

ggplot2

Now, let us

PRACTICE

Start by downloading Tutorial2.Rmd to Your Computer from the Course Website and open the file in RStudio

Closing?

Disperse and Make Reasonable Decisions