

# Statistical Computing and Graphical Analysis

Stat 408



## Today's Class

- Course Description
- Syllabus
- Resources
- R-Review
- R-Projects
- R-Packages
- R & R-Studio Installations + Introductions

## WARNING: PROGRAMMING IS FRUSTRATING

- Computers do exactly what we tell them to do, not what we're thinking they should do
- Lots of finicky little conventions must be memorized
- Fun part is to get it to do new and beautiful things. There is a reward in the end. Computers are fast and accurate.

## Keys to Success

- Stay organized. Create a folder for STAT 408, subfolders as needed for notes, homework, ...
- R-Projects is a great way to facilitate your organization

## R IS:

- A programming environment
- A way to run stat analyses
- Built of functions and objects
- Great at making complex plots (not necessarily easy)
- A project involving work from hundreds of people
- Rapidly expanding.

## Install Packages: Tidyverse

- The tidyverse contains dplyr, ggplot2 and a set of other useful R packages.
- Most of the packages in the tidyverse were created by Hadley Wickham.
- The tidyverse is a modern way to express R code for data wrangling, storage, and visualization.

## install vs library

- `install.packages("package.name")` – loads the content into R
- `library(package.name)` – tells are to unpack and use the contents

## Examples

