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**Intro Statistics Tutorials Using learnr**

**Overview**

The learnr package for R allows users to build interactive tutorials that may include video, low stakes quizzes, an interface to run R code to complete exercises, images, and Shiny apps. I used this tool to build an R package called IntroStatsTutorials that provides tutorials for all of the major topics included in an Intro Psychological Statistics course.

**Content**

Tutorial 1: Terminology

Tutorial 2: Data Visualization

Tutorial 3: Central Tendency and Dispersion

Tutorial 4: Normal Distribution/Probability

Tutorial 5: Correlation

Tutorial 6: Regression (simple and multiple)

Tutorial 7: Null Hypothesis Significance Testing Introduction

Tutorial 8: t-tests

Tutorial 9: One Factor ANOVA

Tutorial 10: Factorial ANOVA

Tutorial 11: Chi-square

**Instructions**

The tutorials are self-contained and simple to navigate, however, some users do experience challenges installing them.

First, make sure to update both R and R Studio to the newest versions. Next, issue the following commands. I find it easiest to install one at a time. Do watch for errors. A common error on some platforms will indicate that a certain package is not available. In those instances, simply install the problematic package and then re-run your code.

install.packages ("devtools")

install.packages("learnr")  
install.packages("car")  
install.packages("ggplot2")  
install.packages("lsr")

install.packages("shiny")

Next, install the tutorial package. That is accomplished with the following code.

devtools::install\_github("chrisaberson/IntroStatsTutorials")

Finally, run the tutorial. Some examples of code for starting a tutorial appear below.

library(learnr)

run\_tutorial("regression", package = "IntroStatsTutorials")

run\_tutorial("ttest", package = "IntroStatsTutorials")

To see available tutorials in the package use the following command: learnr::available\_tutorials(package = "IntroStatsTutorials")

If you experience problems or have comments, please email [chris.aberson@humboldt.edu](mailto:chris.aberson@humboldt.edu)

Example lesson and available materials interface below (includes videos, quizzes, exercises, among other materials)

Graphical user interface, application

Description automatically generated