

1135-K5-1220      **Alana J Unfried\*** (aunfried@csumb.edu), Department of Mathematics and Statistics, 100  
Campus Center, Seaside, CA 93955. *Using Interactive R Tutorials and Reproducible Research  
Practices to Introduce Statistical Learning Ideas to Undergraduate Statistics Students.*

The demand for data-savvy workers has led to an increase in undergraduate students seeking advanced statistical training. Therefore, statistics faculty in my department are bringing prominent statistical software and advanced statistical topics into the undergraduate classroom. In particular, I will discuss an upper-division Linear Models course that heavily utilizes R software for computation. To enhance student understanding through the use of active learning and real, multivariate data, I utilize R Tutorials and R Markdown throughout the course. Interactive R Tutorials are a new tool created by RStudio, available through the `learnr` package. R Markdown, also from RStudio, creates a reproducible document that weaves together text, code, and results. I will discuss my use of R Tutorials to introduce the statistical learning topics of cross-validation and principal components analysis to Linear Models students. This allows students to be actively involved in learning both programming and statistical concepts in class. I will also discuss the implementation of lab assignments through R Markdown on the same topics. R Tutorials and R Markdown can be utilized in any statistics course, introductory or beyond, that incorporates the R programming language. (Received September 20, 2017)