**Week 10 Paper**

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Here is what I took away from the chapter of the “Practical Data Science with R” reading:

1. Functional classification methods, such as linear and logistical regression, are very useful when you do not only want to predict an outcome, but also want to know the relationship between variables.
2. Linear regression is the first thing to try when trying to predict a numerical quantity. Even if it doesn’t work, it can give you valuable information as to which method to try next. In general, linear regression models the expected value of something in terms of its inputs, though it struggles with a large number of variables. However, this can be remedied by adding or transforming variables.
3. Logistical regression is the go-to for a binary question. It struggles with similar issues as linear regression such as a large number of variables, or categorical variables with a large number of categories. Furthermore, it can predict well even in the presence of correlated variables, though they can lower quality of advice. As always, for both regression methods, rechecking your model on test data is the best diagnostic tool.