Week 6 Reading Guide Part 1: Model Selection

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|  Answers in different color text |
| It is **really** helpful for me if you make your answers in a different color, so I can easily pick them out! |

**What is parsimony? How does parsimony relate to Occam’s Razor?**

**What do we mean by the term “full model”?**

**What is the relationship between the variance of** $\hat{y}$ the variance of $y$ and the variance of the residuals?

**What is the formula for** $R^{2}$?

**What values must** $R^{2}$ fall between?

**How do you interpret** $R^{2}$?

**Why can’t you use** $R^{2}$ for regressions with more than one (1) explanatory variable?

**How does adjusted** $R^{2}$ remedy this issue?

**Suppose you have a two categorical variables included in your regression, one with 7 levels and one with 4 levels. What value will you use for** $k$ in the calculation of $n−k−1$?

**What is stepwise model selection?**

**How does backward selection work?**

**How does forward selection work?**