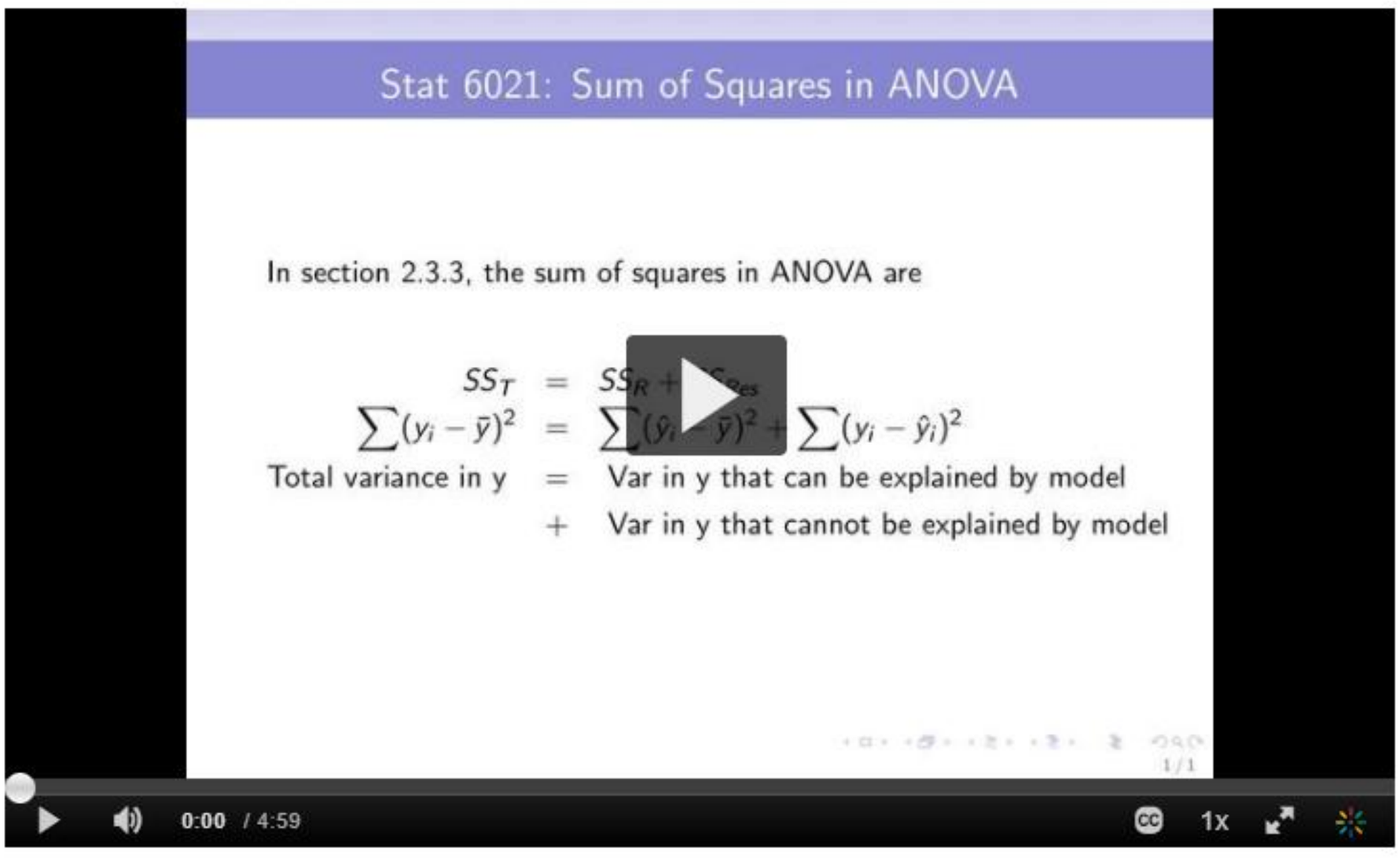
Topic 1.4: Estimating the Variance of a Regression Model

Read Section 2.2.3 of your textbook. As you read, take notes on the following.

1. Write down the formulas for the following, as well as their degrees of freedom. Also describe what each of them are measuring, as well as the relationship between these three formulas.
   - Total sum of squares (SS_T)
   - Regression sum of squares (SS_R)
   - Residual sum of squares (SS_{res}):
2. What is the relationship between SS_T, SS_R, and SS_{res}?
3. Write down the formula for the estimated variance, $\hat{\sigma}^2$, of a regression model.

Watch this video to see a pictorial representation of the various sum of squares associated with ANOVA.



mod1_sum_squares.pdf

Slides to accompany the "Visualization of Sum of Squares" video