Ps03 Question 1

Since we want the median to be close to 0, it means the model is not skewed to one way or another, and the Min and Max has the same magnitude.

It doesn’t seem to have any outlier.

The coefficients: the numbers are positive for all of them. The st. Error is the average amount that the estimate varies from the actual value, and it is a small amount.

T value: the t value has a high magnitude, “157.19 and 43.04” which can be concluded that the coefficient is statistically significant.

P value: since we have three “\*\*\*” as eristics, it means that the p value has a high significance. p-value: < 2.2e-16 In this case because the number is much smaller than 0.05 this model is statistically significant.

Call:

lm(formula = voteshare ~ difflog, data = Incumbets\_subset)

Residuals:

Min 1Q Median 3Q Max

-0.26832 -0.05345 -0.00377 0.04780 0.32749

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.579031 0.002251 257.19 <2e-16 \*\*\*

difflog 0.041666 0.000968 43.04 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.07867 on 3191 degrees of freedom

Multiple R-squared: 0.3673, Adjusted R-squared: 0.3671

F-statistic: 1853 on 1 and 3191 DF, p-value: < 2.2e-16

d. Prediction equation

The predicted difference increases by b = 0.041 difference between difference in expending between the two candidates.