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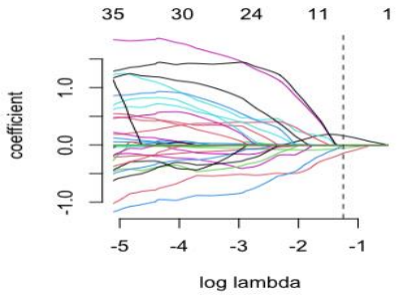
ECON 124
Leung
8th February, 2022

HW 2B – ECON 124

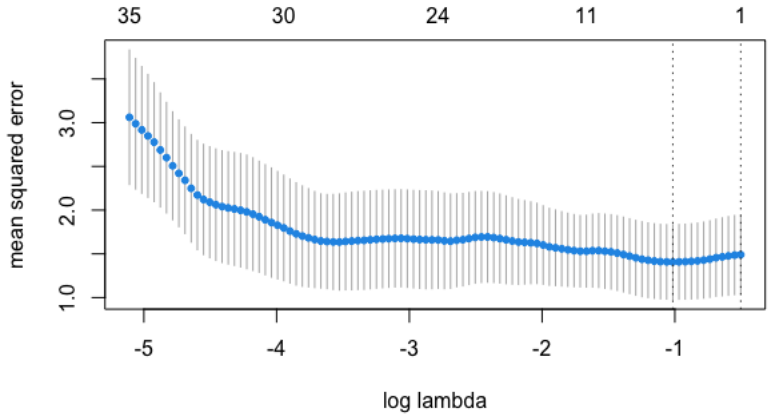
9. a)



b) As we move our lambda from left to right on the plot, we notice our coefficients converge to 0. This is because, as the lambda penalty becomes more relevant in the regression, any given covariate becomes less relevant to the outcome of the regression.

c) A regression with a lambda of log(-1) might have a very high bias, as it isn't expected to fit the training data as well as a regression with a lambda of log(-5) for example. A regression with a lambda of log(-5) might have a much higher variance, as it might fit the training data very well, but might not fit the testing data nearly as well.

10.



There is a clear trough at a lambda of roughly log(-1). This signifies a lambda at which MSE is minimized. This is a measure of variance, and is expected to reflect a higher bias in relation to other lambdas.

11. The coefficients that appear to be nonzero are TmMEM, WS, and OBPM. TRB, AST, STL, BLK, and BPM are not nonzero.

12. The same coefficients are nonzero by this criterion, but the values themselves are slightly different.

13.

14. b) There are the same number of covariates now. The covariates are the exact same ones as well.
15. Based on my analysis, LeBron James is underpaid.