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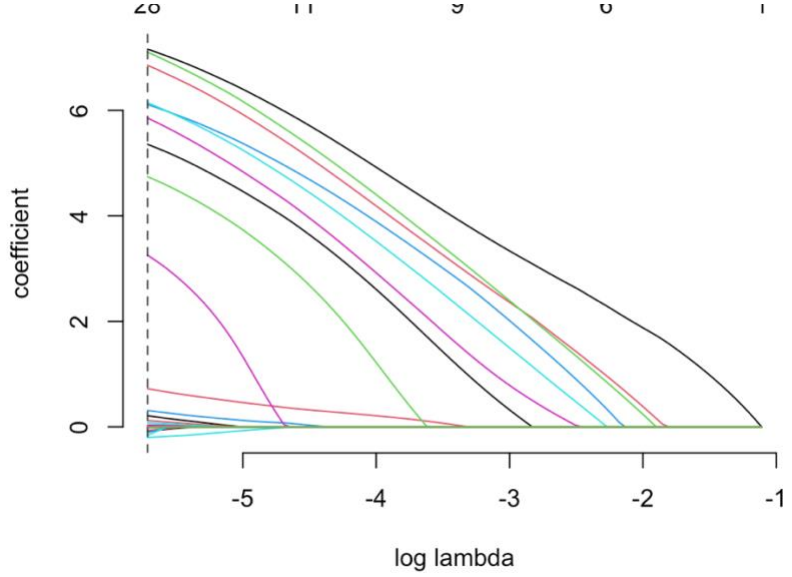
Leung
ECON 124
22nd February, 2022

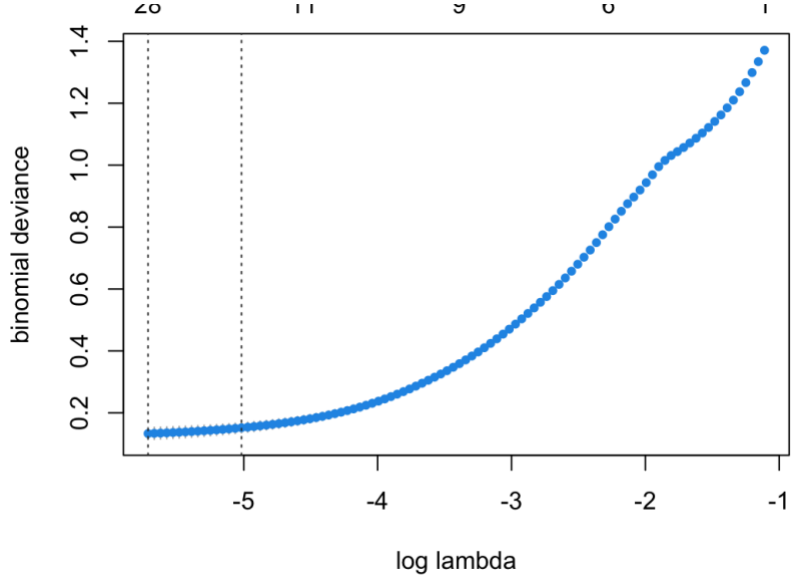
HW3

1.
2.

a.



b.



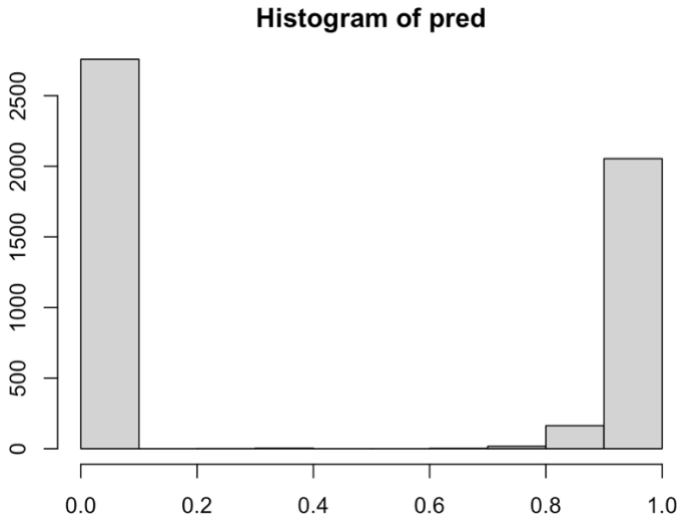
I would call this model complex due to the large number of regressors.

c. There were 28 non-zero regressors chosen by the model. This points to the model being quite complex. It has high complexity.
d. The deviance on this plot increases more steadily than usual. There don't appear to be any overfit models, as the lowest deviance models are within the band.

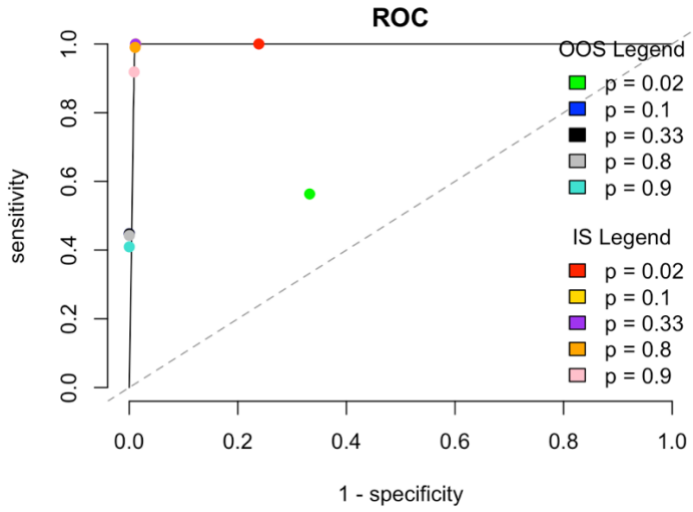
Since there were 28 covariates found, and the lower bound of the band is found at lambda = 28, we can conclude that there aren't overfit models found.

e. RF_FURT, RF_BULG, RF_VCRIM, and RF_OTHSW were some of the strongest predictors. I was surprised not to see race among the predictors here.

3.

a. 

The histogram has most of its weight on the ends (0 and 1) which implies that it is good at making fairly discrete binary decisions. This means that it is very certain.

b. 

All IS *p*s are very close to perfectly fit, since they all have a sensitivity of .9 or higher. The OOS *p*s are closer to the 45 degree line, on the other hand. This aligns with what we can see in part A, as the binary outcomes are sensitive to changes.

c. The data points to the fact that frisking is largely driven by suspicious appearance, movement, or actions. This is good to know, as race or ethnicity should never be a part of these decisions, unless it is used to match a description of a suspect. The unfortunate fact is that these predictors still don't often result

in correct frisk decisions, and they don't really do a great job of guiding these choices.