Set S04 - Model comparison

STAT 401 (Engineering) - Iowa State University

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Comparing nested models

Recall that we have discussed how to compare nested regression models:

- linear regression: F-tests
- generalized linear regression models: likelihood ratio (drop-in-deviance) tests

How do we compare non-nested models?

R^2 always increases as explanatory variables are added

Since the coefficient of determination (R^2) explains "the proportion of variation explained by the model", it seems you would want to choose the model with the highest R^2. But R^2 always increases as explanatory variables are added to the model and thus cannot be used to compare models with different numbers of explanatory variables.