Diagram

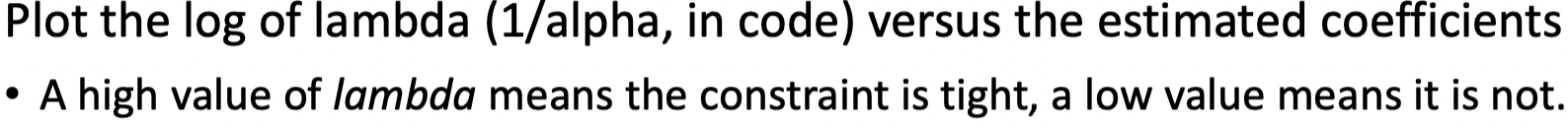
Description automatically generated A picture containing text

Description automatically generated Diagram

Description automatically generated Text

Description automatically generated Diagram, text

Description automatically generated Diagram

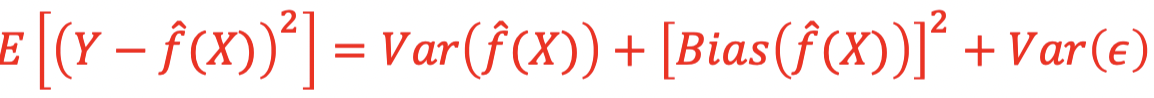
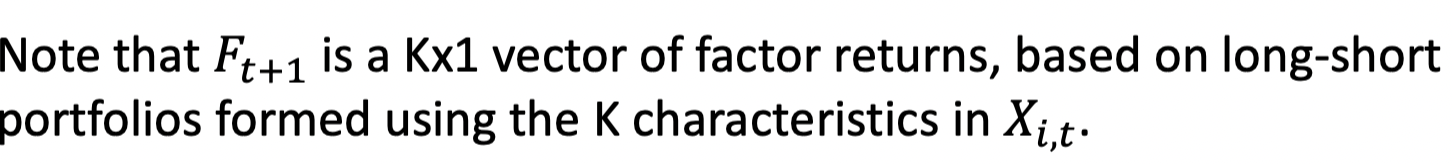
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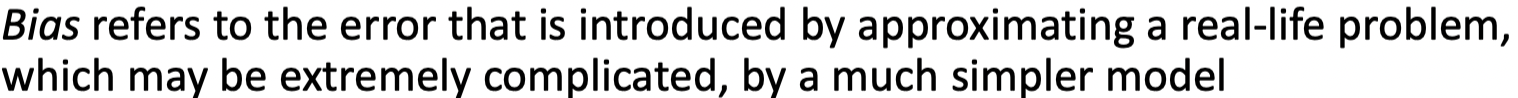
Description automatically generated with medium confidence A picture containing shape

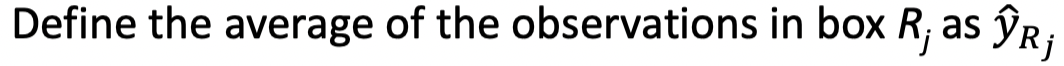
Description automatically generated  Text

Description automatically generated with medium confidence A picture containing text

Description automatically generated Text

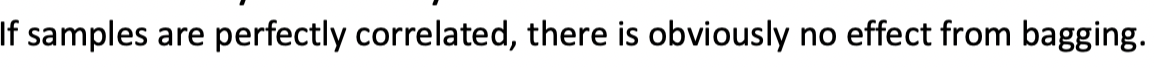
Description automatically generated Text

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The objective function is then to find the set of boxes that minimizes the sum of squared errors(SSE): 

A picture containing text, watch, gauge

Description automatically generatedA picture containing icon

Description automatically generatedIn particular, a random selection of m of the p predictors are chosen for each bootstrapped sample. This reduces correlation due to less overlap

Bagging involved overfitting of each individual tree, but then averaging to get rid of noise in samples with low correlation, Boosting fits smaller trees and instead learns slowly by sequentially adding small trees fit to the prediction errors of the existing ‘ensemble’ of trees. Thus, each tree added depends on the trees already grown

A red and white sign

Description automatically generated with medium confidenceText

Description automatically generatedText, letter

Description automatically generatedA picture containing text, watch

Description automatically generated

XGBoost

A regularization term defines tree complexity as:

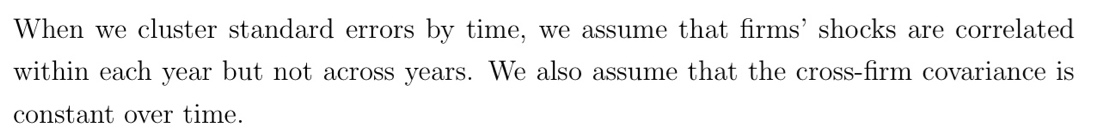
A picture containing text, clock, watch, gauge

Description automatically generatedloss functionA picture containing text, clock, watch

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 Text

Description automatically generated with medium confidence Text

Description automatically generated  Text

Description automatically generated Text, letter

Description automatically generated Graphical user interface, text, application

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