Lambda Grid for Elastic Net

-Applied Analytics-

(Extra notes)

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Some comments about glmnet and CV

Though glmnet automatically allocates a grid, it isn't necessarily any good

Sometimes...

- the grid values are too far apart near the minimum
- the grid doesn't allow small/large enough λ values

Some comments about glmnet and CV

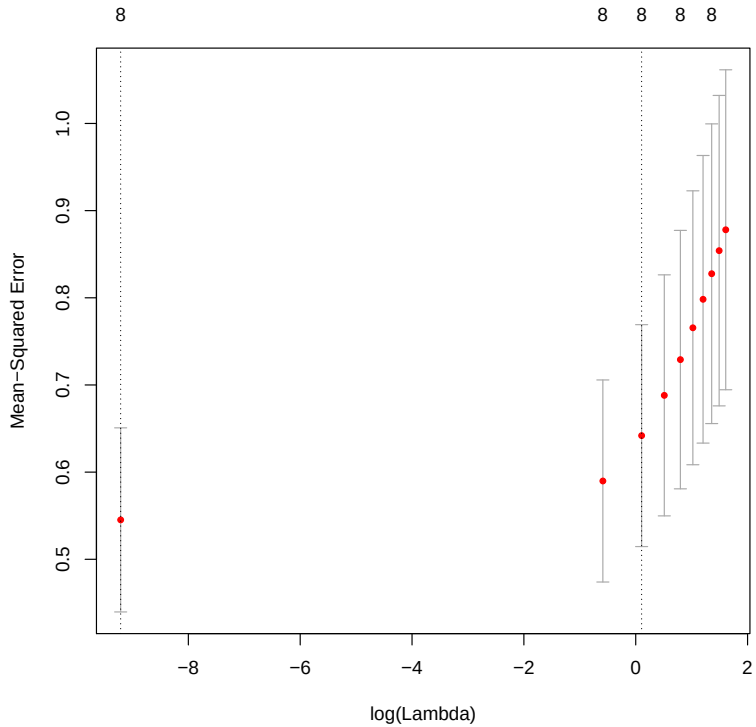


Figure: *

Example of a bad minimum: Grid values too far apart

Some comments about glmnet and CV

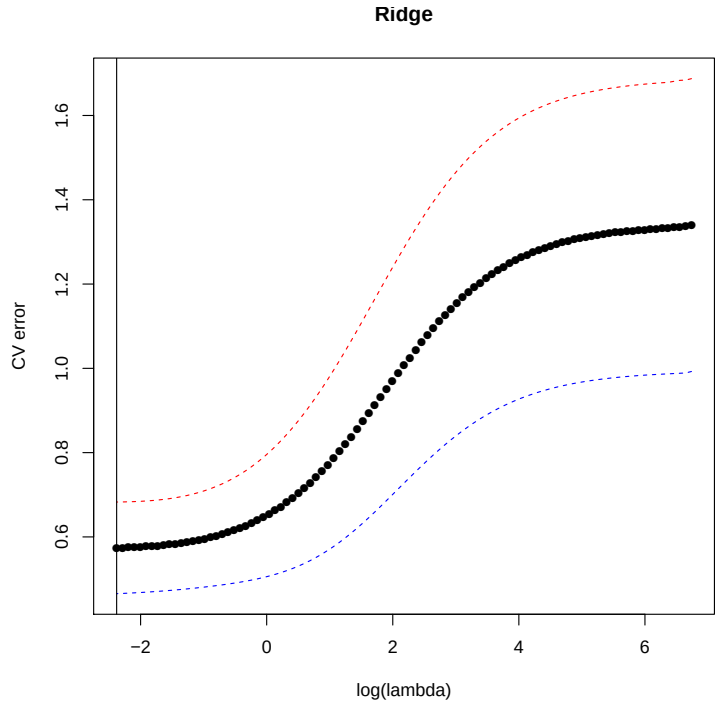


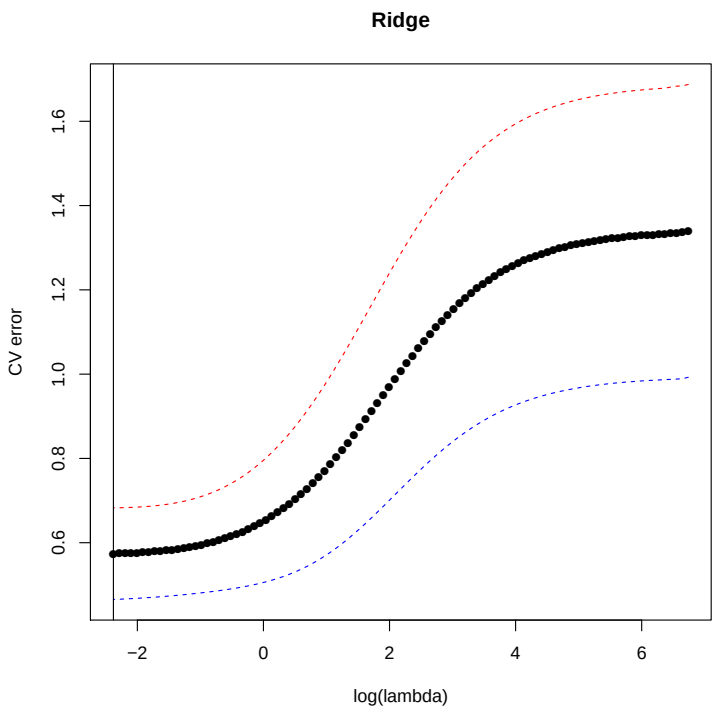
Figure: *

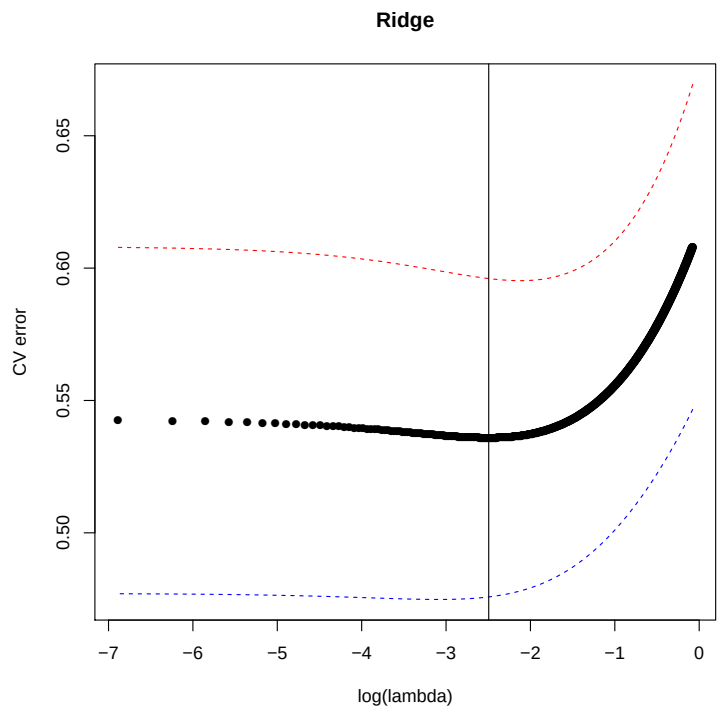
Example of a bad minimum: Grid values too large

Some comments about glmnet and CV

How to fix it:

```
ridgeCV   = cv.glmnet(x=X,y=Y,alpha=0)
lambdaMin = min(ridgeCV$lambda)
lambdaNew = seq(lambdaMin*10,lambdaMin*.001,length=1000)
ridgeCV   = cv.glmnet(x=X,y=Y,alpha=0,lambda=lambdaNew)
lambdaHat = ridgeCV$lambda[which.min(ridgeCV$cvm)]lambdaNew
```





New minimum, after moving λ grid smaller