

## HW-3, P6,7

**P6:** a ridge regression is implemented and then compare to glmnet function for this purpose

**My built model:**

`Ridge_R(x,y,100)`

##this function give us a vector contain 15000  $B_{\text{hat}}$  by ridge regularization.

**R ridge regression:**

`glmnet_ridge(x,y)`

## this function created based on glmnet R function and give us a vector contain 15000  $B_{\text{hat}}$  by ridge regularization.

## by running My built model and R ridge regression these parameters are comparable

**P7:** 1) first fit a model to whole data (by lasso regularization)

2)then use CV for error calculation

`lasso_model(x,y,test_x)`

`CV_error_lasso_R(x,y,test_x ,50)`

## $Y_{\text{hat}}$  and predicted real  $y(y)$  is saved in **result folder** in r project.

## total CV\_error in this case is 2.24