```
library(caret)
#ML with R data:mtcars

#1 split data
spit_data <- train_test_split(mtcars)
train_data <- spit_data[[1]] #0.8
test_data <- spit_data[[2]] #0.2


#2 train defualt = Bootstrapped
# cv = K-fold
set.seed(124)
ctrl <- trainControl(method = "repeatedcv",
                     number = 10, #k=10
                     repeats = 10,
                     verboseIter = TRUE)
model <- train(mpg ~ hp + wt,
        data = train_data,
        method = "lm",
        trControl = ctrl)

#3 score model
p_mpg <- predict(model, newdata = test_data)

#4 evaluate
error <- p_mpg - test_data$mpg  #find error
(test_rmse <- sqrt(mean(error **2)))  #find overfitting

#5 save model
saveRDS(model,"LinearReg_Model.RDS")
```

```
#LOAD MODEL
model <- readRDS("LinearReg_model.RDS")

#batch prediction
nov_data <- data.frame(
  id = 1:3,
  hp = c(200, 150, 188),
  wt = c(2.5, 1.9, 3.2)
)

nov_prediction <- predict(model, newdata = nov_data)
```