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# Manually bootstrapping linear regression in R

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▲ |Hi guys, I am asking you for help as I am stucked with bootstrapping...

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▼ The task is: *Use the nonparametric bootstrap to compute bootstrap standard error of CAPM beta estimate based on 1000 bootstrap replications and bootstrap sample size equal to the size of the original sample.*

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If I understand it correctly, I am supposed to run my regression model 1000 times to estimate different estimates of the beta and its standard error. However, I am not able to put my thoughts into an actual R code.

My code:

```
#1)fetch data from Yahoo
#AAPL prices
apple08 <- getSymbols('AAPL', auto.assign = FALSE, from = '2008-1-1', to =
"2008-12-31")[,6]
#market proxy
rm08<-getSymbols('^ixic', auto.assign = FALSE, from = '2008-1-1', to =
"2008-12-31")[,6]

#Log returns of AAPL and market
logapple08<- na.omit(ROC(apple08)*100)
logrm08<-na.omit(ROC(rm08)*100)

#OLS for beta estimation
beta_AAPL_08<-summary(lm(logapple08~logrm08))$coefficients[2,1]
```

OK, I've got the coefficient estimate of AAPL beta for '08. Now, I would like to run bootstrap on the beta and its standard error 1000 times with the sample size same as the original.

```
set.seed(666)
Boot_times=1000
mean.boot=rep(0,Boot_times)
for(i in 1:Boot_times){
  # nonparametric bootstrap
  data.boot=#Here I am stucked, I dunno what to put here
  boot[i]=data.boot
}
```

I have thought about using