

R Exercise 3

Greg Ceccarelli

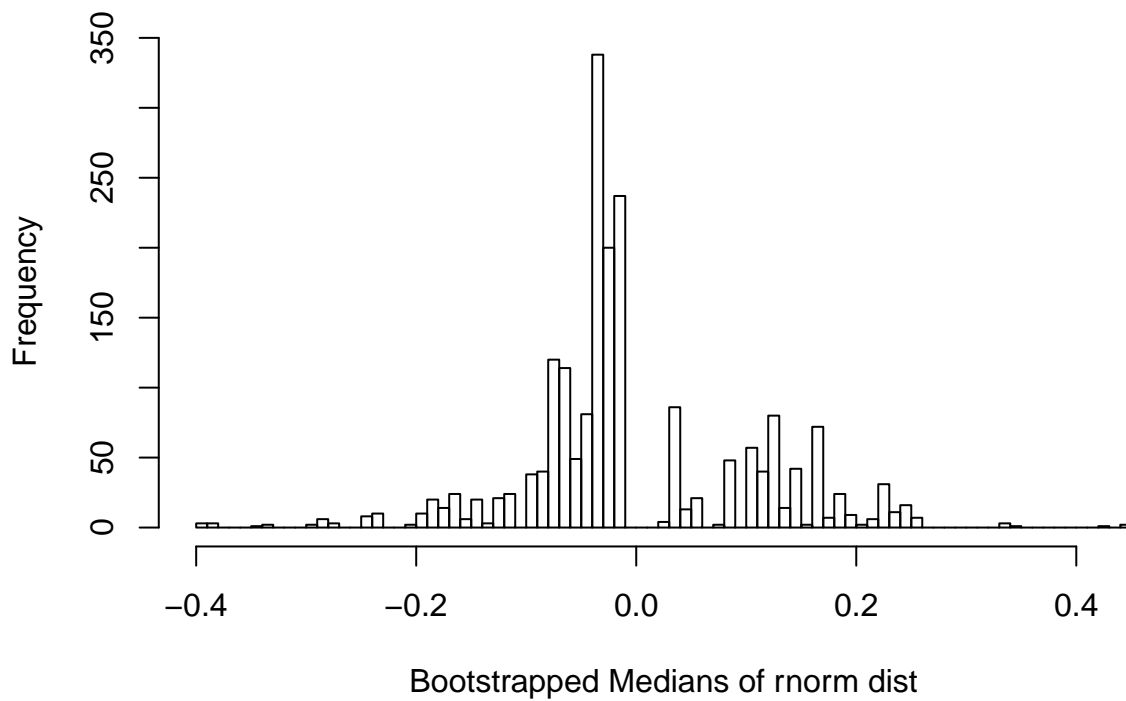
July 22, 2015

Bootstrapping

```
rm( list = ls())
NBS<-2000
#manual bootstrapping function
fun.boot <- function(data,NBS) {
  bssamp <- numeric(NBS)
  #collecting iterations
  for (i in 1:NBS) {
    bssamp[i] <- median(sample(data, replace = T))
  }
  conf = quantile(bssamp,c(.025,.5,.975))
  return(list(bssamp,conf))
}

l <- fun.boot(rnorm(100),NBS)
#inspecting distribution
hist(as.numeric(unlist(l[1])),breaks=100,xlab="Bootstrapped Medians of rnorm dist")
```

Histogram of as.numeric(unlist(l[1]))



Numerical Optimization

```

### Didn't get through this... will continue later

objf = function(r, number , k)
{
  # how good a candidate is r for root k of number
  measure =
  return (measure)

}

rootk = function(number, k, start = NULL)
{
  ...

  if (is.null(start)) # assign a starting point if it is not given
    start = # starting point
  # call optim

  # check if it is working

  return(r)
}

```