

Assignment 4 Question 1 a)

Sheen Thusoo

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Write a function named `VarIQR` that takes in a population or sample of variates and outputs the variance σ^2 and the inter-quartile range *IQR*. Apply this function to the population of Mobility values.

```
data <- read.csv('EconomicMobility.csv')
```

```
VarIQR <- function(pop, N) {  
  variance <- var(pop) * (N-1)/N  
  iqr <- IQR(pop)  
  c(variance, iqr)  
}
```

```
N <- length(data[,1])  
result <- VarIQR(data$Mobility, N)
```

```
cat("Variance of Mobility: ", result[1])
```

```
## Variance of Mobility: 0.002768671
```

```
cat("IQR of Mobility: ", result[2])
```

```
## IQR of Mobility: 0.05341837
```