

# Correlation Analysis

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```
# data loading
AlzData <- read.csv(file.choose(), header = T)
View(AlzData)
attach(AlzData)
```

## data exploration

```
dim(AlzData)

## [1] 50 23
AlzData <- na.omit(AlzData)
```

## correlations

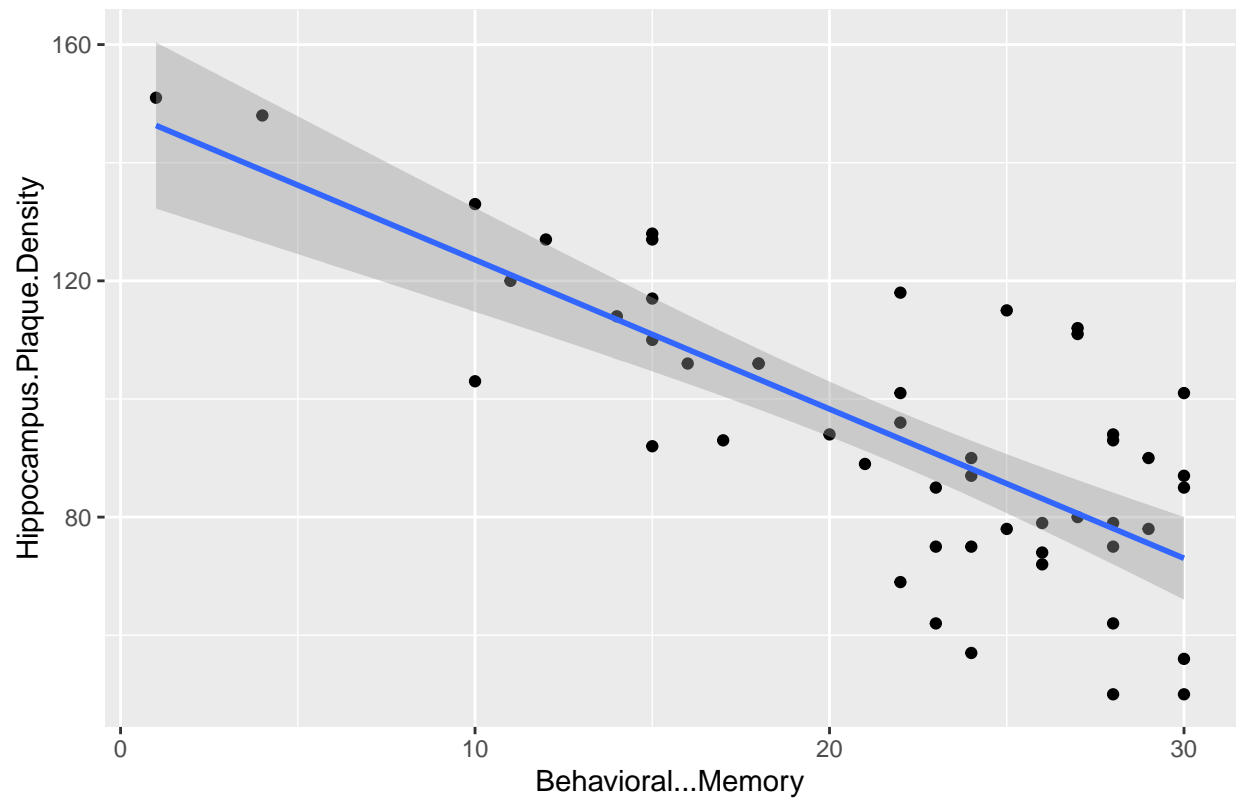
```
cor(Behavioral...Memory, Hippocampus.Plaque.Density)

## [1] -0.7515362
library(ggplot2)

## Warning: package 'ggplot2' was built under R version 3.5.3
qplot(Behavioral...Memory, Hippocampus.Plaque.Density, geom = c('point', 'smooth'), method = 'lm', main

## Warning: Ignoring unknown parameters: method
```

scatter plot of Memory ability and Hippocampus plaque Density



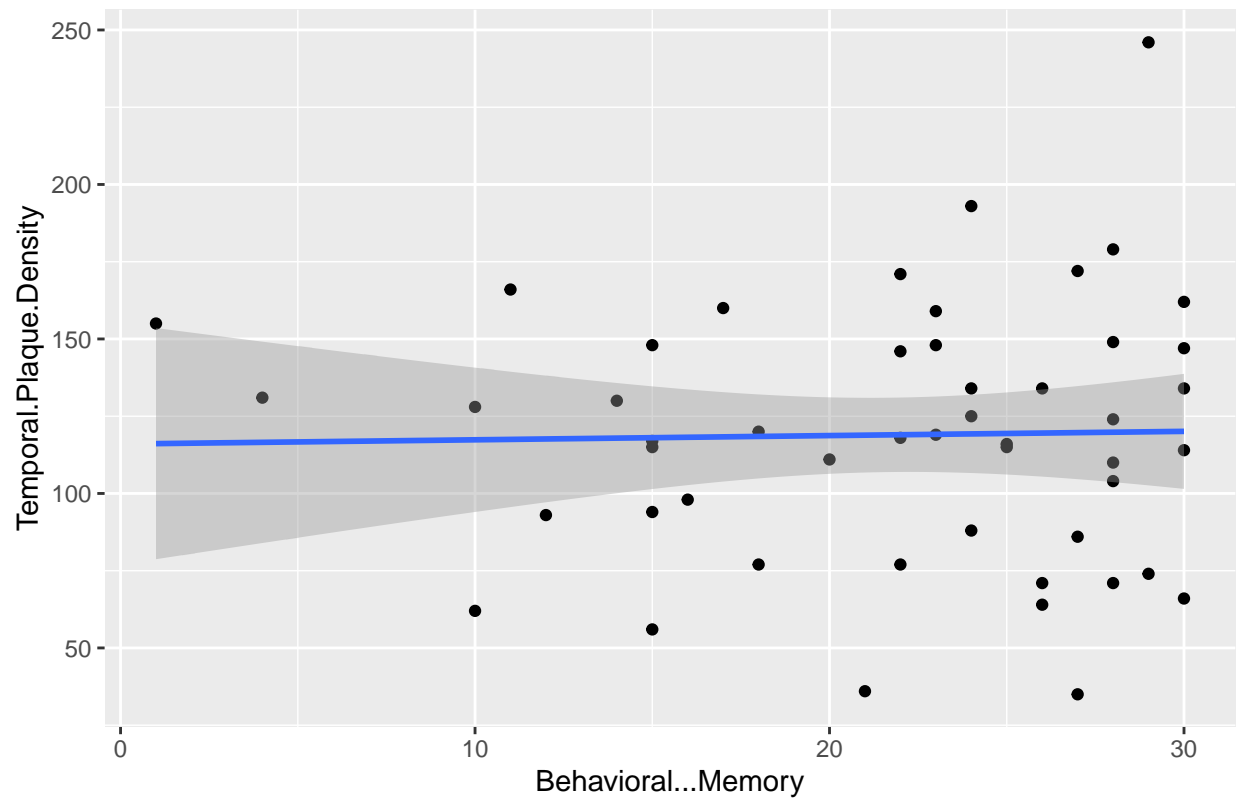
```
cor(Behavioral...Memory, Temporal.Plaque.Density)
```

```
## [1] 0.02315798
```

```
qplot(Behavioral...Memory, Temporal.Plaque.Density, geom = c('point', 'smooth'), method = 'lm', main =
```

```
## Warning: Ignoring unknown parameters: method
```

scatter plot of Memory ability and Temporal plaque Density



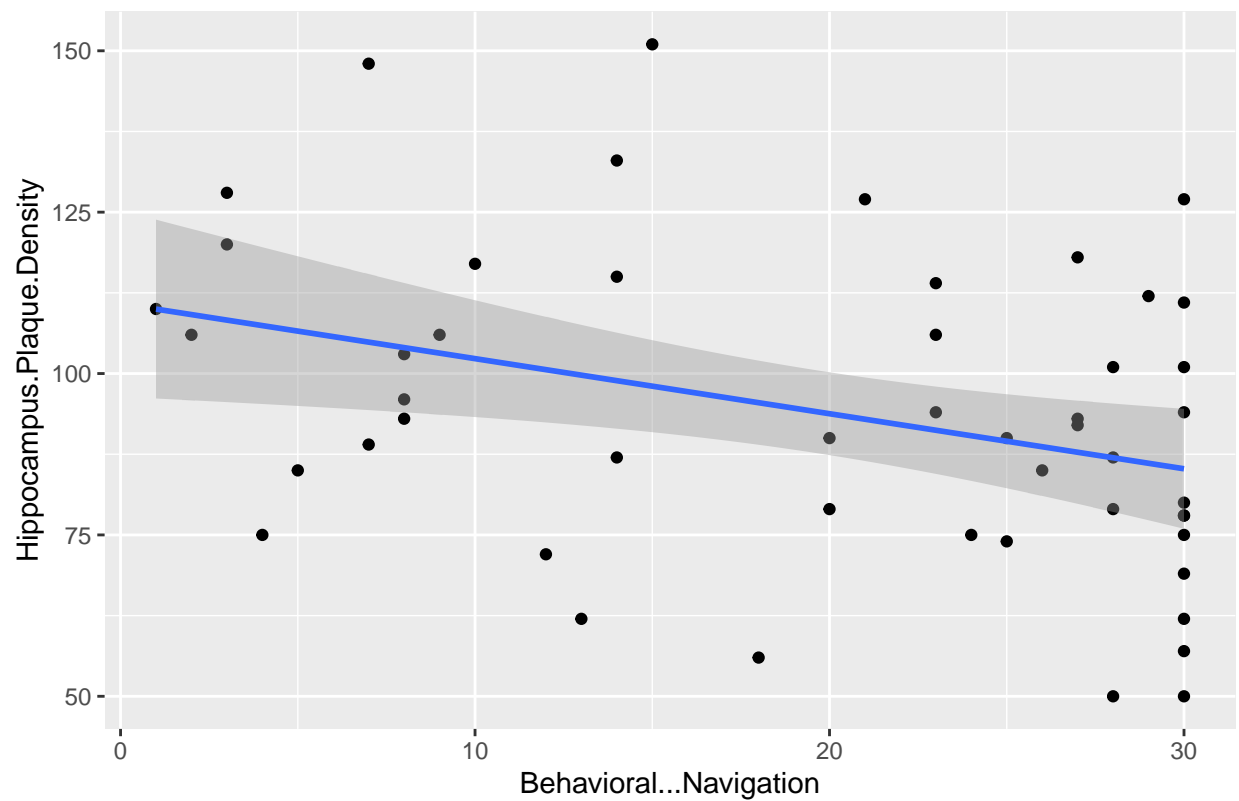
```
cor(Behavioral...Navigation, Hippocampus.Plaque.Density)
```

```
## [1] -0.3534729
```

```
qplot(Behavioral...Navigation, Hippocampus.Plaque.Density, geom = c('point', 'smooth'), method = 'lm', r
```

```
## Warning: Ignoring unknown parameters: method
```

scatter plot of Navigational ability and Hippocampus plaque Density



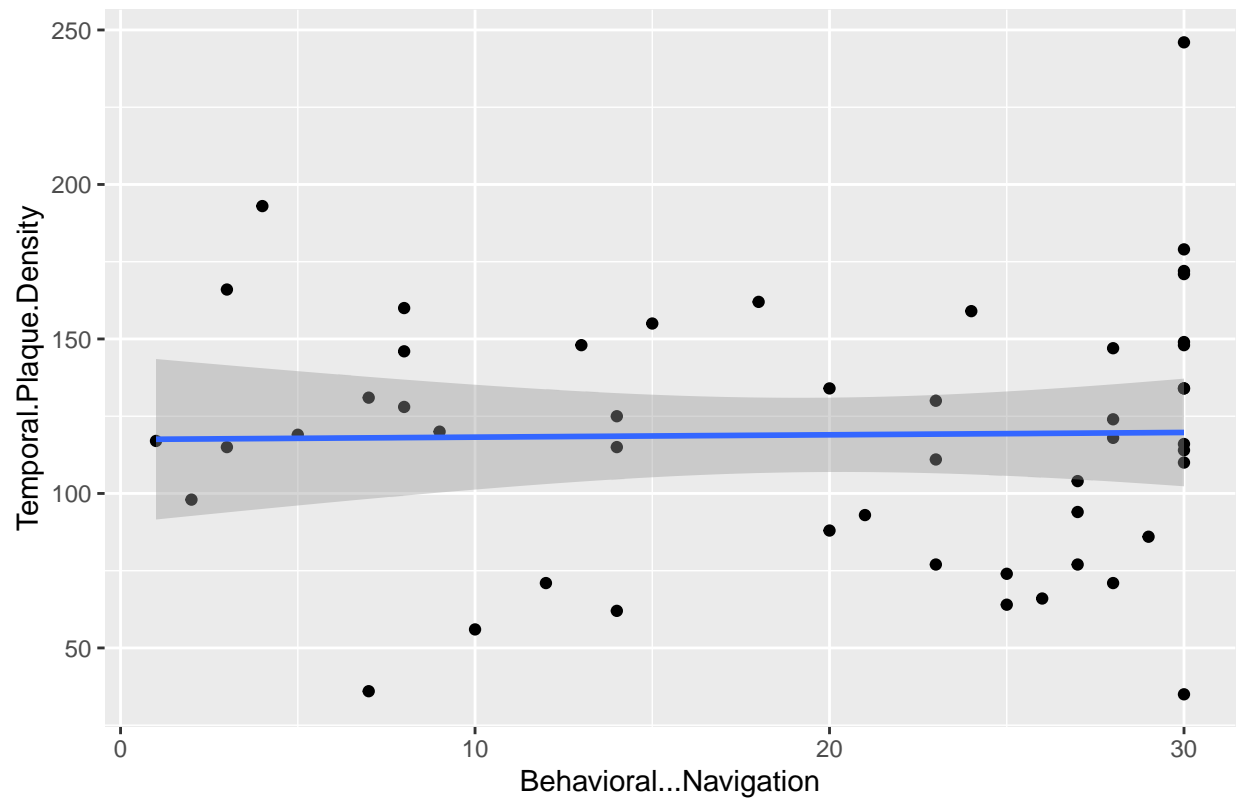
```
cor(Behavioral...Navigation, Temporal.Plaque.Density)
```

```
## [1] 0.01790631
```

```
qplot(Behavioral...Navigation, Temporal.Plaque.Density, geom = c('point', 'smooth'), method = 'lm', main = '')
```

```
## Warning: Ignoring unknown parameters: method
```

scatter plot of Navigational ability and Temporal plaque Density

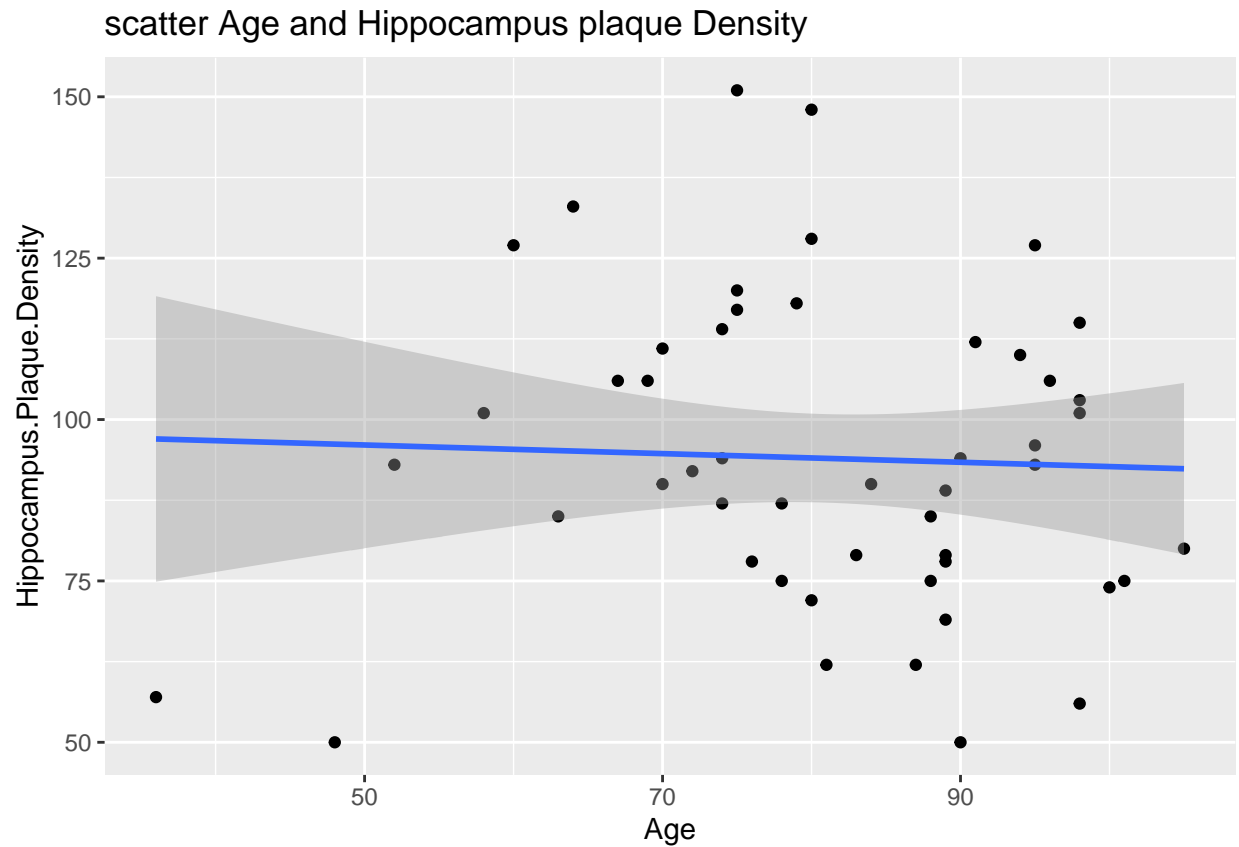


```
cor(Age, Hippocampus.Plaque.Density)
```

```
## [1] -0.04129472
```

```
qplot(Age, Hippocampus.Plaque.Density, geom = c('point', 'smooth'), method = 'lm', main = 'scatter Age a
```

```
## Warning: Ignoring unknown parameters: method
```



```
cor(Age, Temporal.Plaque.Density)
```

```
## [1] 0.08751625
```

```
qplot(Age, Temporal.Plaque.Density, geom = c('point', 'smooth'), method = 'lm', main = 'scatter plot of
```

```
## Warning: Ignoring unknown parameters: method
```

scatter plot of Age and Temporal plaque Density

