



**ACADGILD**

# SESSION 7: Basic Statistics

## Assignment 2

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## 1. Introduction

This assignment will help you understand the concepts learnt in the session.

## 2. Objective

This assignment will test your skills on basic statistics.

## 3. Prerequisites

Not applicable.

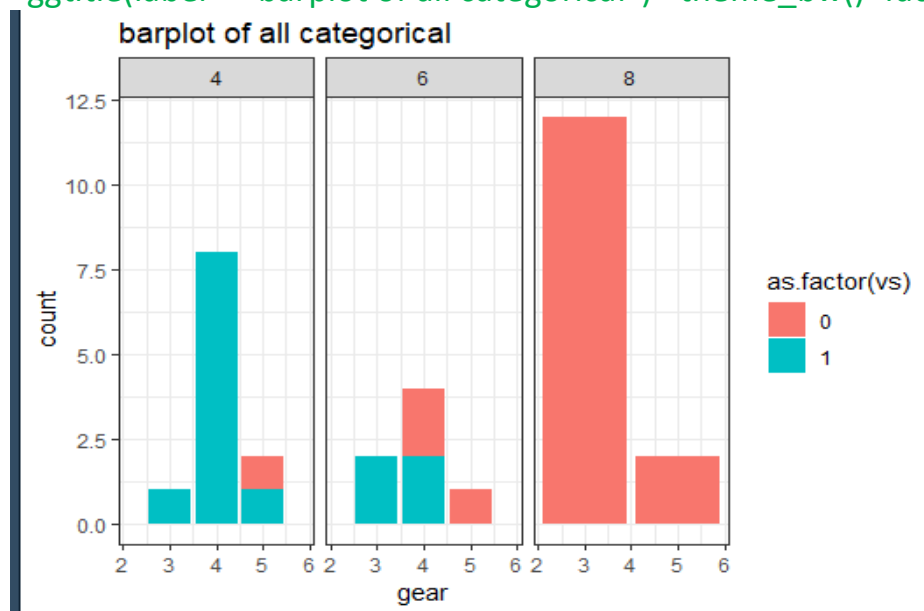
## 4. Associated Data Files

Not applicable.

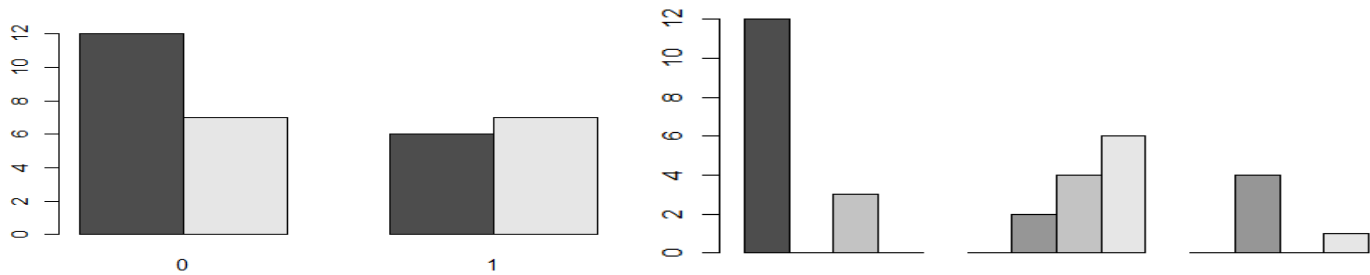
## 5. Problem Statement

1. Write a program to create barplots for all the categorical columns in mtcars.

ANS: `library(purrr)`  
`library(tidyr)`  
`library(ggplot2)`  
`library(dplyr)`  
`ggplot(data = mtcars) + geom_bar( aes(x= gear, fill= as.factor(vs) )) +`  
`ggtitle(label = "barplot of all categorical") + theme_bw() + facet_grid(~cyl)`

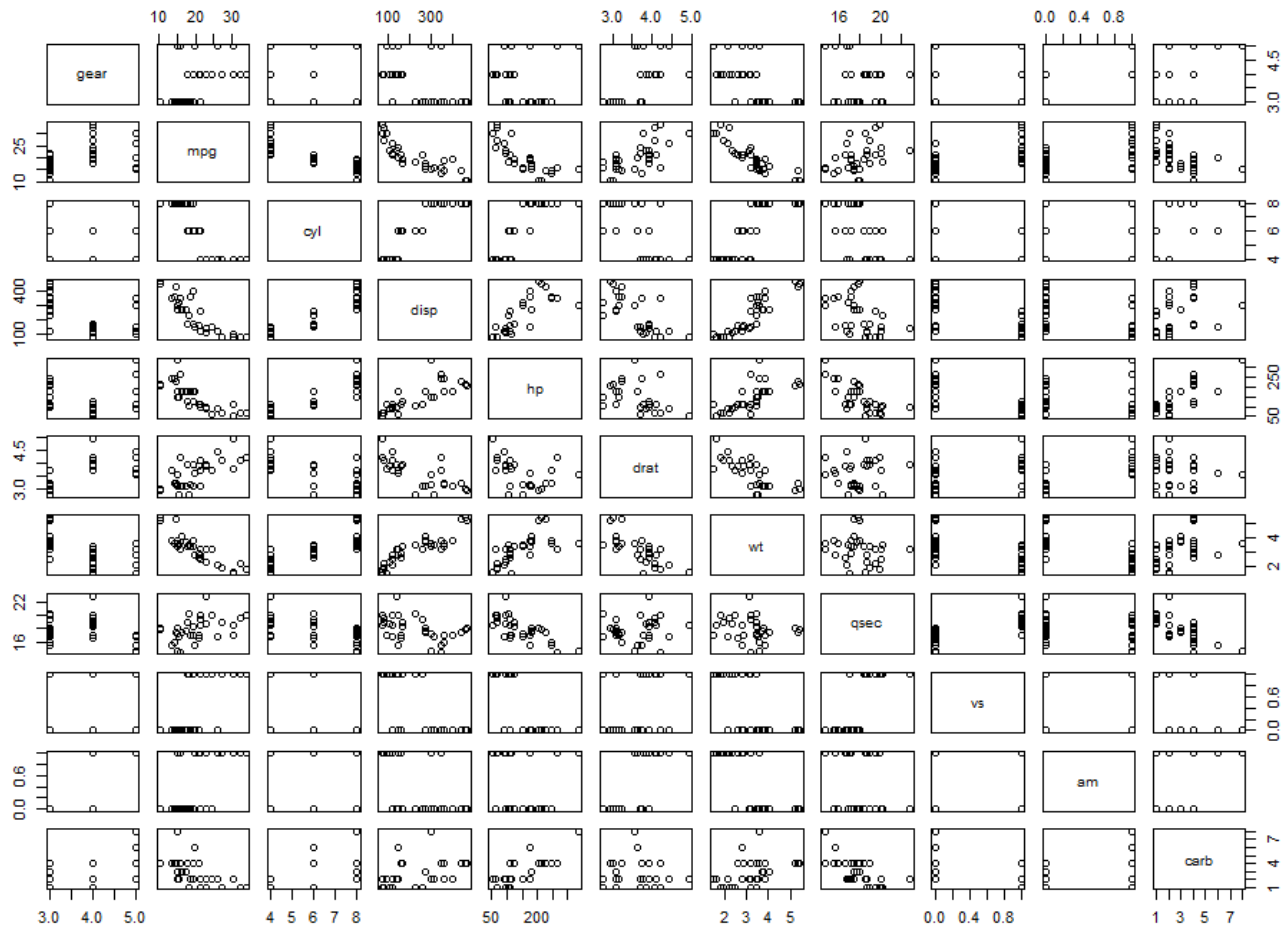


```
attach(mtcars)
with(mtcars, barplot(table(vs,am), beside = TRUE))
with(mtcars, barplot(ftable(vs,am,gear), beside = T), xlab= c('vs','am','gear'))
```



## 2. Create a scatterplot matrix by gear types in mtcars dataset.

ANS: `pairs(gear~., mtcars)`



### 3. Write a program to create a plot density by class variable.

**ANS:** `mtcars %>% keep(is.numeric) %>% gather() %>% ggplot(aes(value)) +  
facet_wrap(~ key, scales = 'free')+  
geom_density()`

